

DAILY METAL REPORTER

MONTHLY SUPPLEMENT

# METALS

Published Since 1929

## *In This Issue*

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By D. A. RHOADES, President  
Kaiser Aluminum & Chemical Corp.

### **OUTLOOK FOR INDUSTRIAL MINERALS**

By C. HYDE LEWIS, President  
New Idria Mining and Chemical Co.

### **DOMESTIC METAL MARKET REVIEW**

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### **METAL STATISTICS**

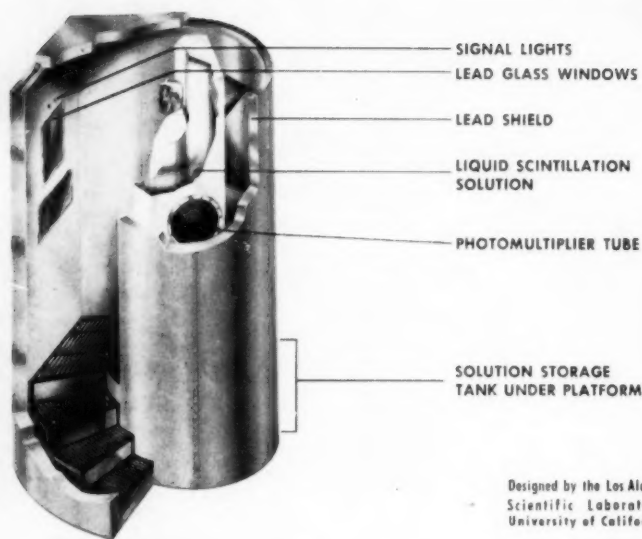
**OCTOBER  
1959**

**16**

**TONS**

**OF**

**LEAD**



Designed by the Los Alamos  
Scientific Laboratory,  
University of California

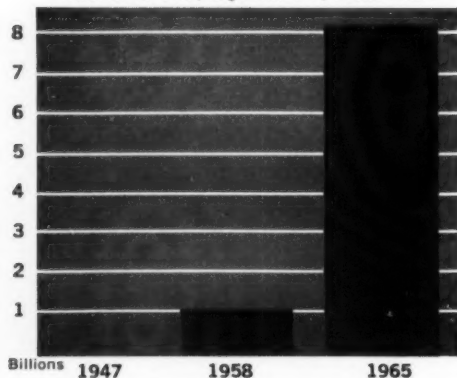
## *Provides The Shielding In This Walk-In* **HUMAN RADIOACTIVITY COUNTER**

The need for instruments that can rapidly and accurately determine very small amounts of radioactivity in people and foodstuffs is urgent. The concern over world-wide fallout from nuclear weapons testing and the problem of efficient monitoring as part of power reactor development emphasize this need. In both cases, large numbers of people are potentially exposed either directly or through the wider, indirect hazard of contaminated food.

This radiation counter was part of the United States exhibit at the Geneva Conference of Peaceful Uses of Atomic Energy. The 16 tons of lead provides a thickness of 3 inches of shielding in all directions. The shape of the shield resembles a snail shell. With this design, there is no direct "line of sight" from outside into the very sensitive gamma-ray counter . . . and eliminates the inconvenience and expense of a heavy door.

Lead, having the best shielding property of all common metals was chosen to provide maximum protection from gamma-rays with minimum weight and floor space. The metal's relative availability and economy was another factor. The cost of the vital 16-ton shield amounted to about 10% of the Geneva counter's total cost. The importance of this application and its potential is exemplified by the chart shown below.

**ESTIMATED CUMULATIVE EXPENDITURES  
FOR REACTOR, EQUIPMENT, FACILITIES**



Source: NUCLEONICS, September, 1957, p. 33

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## Two LINE Editorials

*Fidel Castro insists that he isn't a Communist, but he seems determined to show how much a man can act like a Communist without being one.*

\* \* \*

*Peiping's claim of India's "aggressive trespassing and provocation" somehow reminds us of the old story of the pugilist who hit his opponent's fist with his chin.*

\* \* \*

*Sooner or later, perhaps, if it keeps on trying, the United Nations is going to find some nation willing to do something the U. N. wants it to do.*

\* \* \*

*A magazine writer says we need to find "new sources of knowledge." But isn't there already a lot of available knowledge that is not being used?*

\* \* \*

*As near as we can understand it, the egg crisis is a result of the fact that the hens have been taught how to produce more eggs at just the time the people decided to eat fewer of them.*

\* \* \*

*Astronomers announce the discovery that the universe is constantly expanding. Perhaps that's just one more effect of inflation.*

# BUSINESS IN MOTION

## *To our Colleagues in American Business . . .*

Wham! And the fisherman hooks another record-breaker on the lure you see below. Just as that smart angler knew how to successfully fish that "Pet" Spoon bait so did the maker who designed and perfected it know exactly where to go in search of the brass from which to make that lure.

In order to produce the finest quality bait at a competitive price, he knew that he required a metal that could be easily stamped and formed, and of such quality and uniformity of grain structure that only the minimum of finishing would be required prior to the chromium plating of the lure.

Past experience had proved to this artificial bait manufacturer that, of the various commercial metals available, brass was the metal to use for this lure. For brass is easily stamped and formed . . . has just the right "heft" for casting, does not rust and it takes chromium plating as a fish takes to water. But when it came to selecting the exact type of brass that would best fit his exacting requirements, he called on Revere.

The result was a Revere Brass with special grain

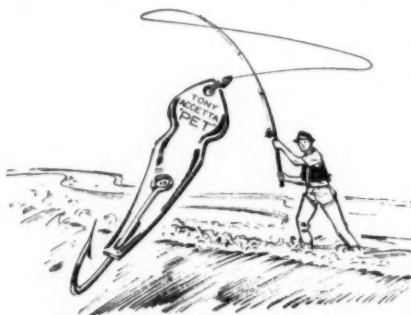
size and finish, and just the right ductility so that even after stamping and forming only a minimum of work is required prior to chromium plating.

Said the manufacturer, "Without a doubt, the fine quality of Revere Brass has contributed immeasurably to the quality of our baits, at the same time saving us money on forming and finishing cost. In fact, it is the quality of the material, plus design

and workmanship that has made it possible for us to be awarded the Medal of Honor by the Sportsman's Club of America for the superiority of design and fish-getting ability of our baits, as well as the National Sportsman's Research Award, which is

a real tribute to the design, workmanship and effectiveness of our lures."

The experience of this manufacturer, once more illustrates how, only by working closely with your supplier are you able to realize the highest return per dollar spent. That, too, is why it may very well pay you to let Revere help you "fit the metal to the job." Others have profited by this service, why don't you take advantage of it?



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# Washington Report



October 21, 1959

**W**ITH Congress out of session, the Executive Branch of the Government made the metal news in Washington during the month in review. A highlight was a joint statement issued after a meeting between President Eisenhower and President Adolfo Lopez Mateos of Mexico, in which both officials said they were "heartened" by the improved world outlook for lead and zinc. The statement said in part:

"The Presidents were . . . heartened by the progress made towards resolving important commodity problems and consequent improvements in world market conditions with respect to basic commodities produced in Mexico and the United States, including . . . the improved outlook for a better balance of supply and demand in world markets for lead and zinc.

"The Presidents agreed that maintenance of the productive capacity of the Mexican mining industry is essential to Mexico's economic progress and to the security of the United States. Consequently, the Governments of both countries will continue to consult each other and the other lead and zinc-producing countries with regard to the measures necessary to achieve these objectives."

Lead and zinc also figured in the news when the Treasury Department announced that, effective October 1, 1959, it was reverting to the rules in effect prior to the third quarter on imports of these metals under the quota system. For the fourth quarter of 1959, all entries will be under telegraphic controls. Under the system in effect during the third quarter, entries of lead and zinc under certain allocations were free to come in without prior authorizations until the quota limitations were approached.

## Reject Pleas for Aid

Speaking of imports, the Administration rejected pleas for tighter curbs on arrivals of foreign cobalt and fluorspar. In both cases, the Office of Civil and Defense Mobilization ruled that imports do not threaten to impair national security.

On cobalt, Defense Mobilizer Leo A. Hoegh turned down a plea by Howe

Sound Co. for a "Government umbrella" over domestic producers of the metal. Restrictive quotas or tariffs designed to assure the price asked by Howe Sound, he estimated, would cost domestic users of cobalt up to \$5,000,000 yearly.

Howe Sound, whose subsidiary, Calera Mining Co., owns the largest domestic cobalt mine, said that continued operation of a mine at Cobalt, Idaho, and a refinery at Garfield, Utah, depended upon some form of Government assistance.

The company specifically asked that the Government either guarantee Calera a market for its metal by extending a now-expired purchase contract for five years, or, as an alternate action, to impose import curbs that would assure domestic producers at least half of current U. S. consumption of cobalt.

Howe Sound recently completed deliveries of cobalt to the Government under a purchasing contract that fixed a price of \$2.30 a pound. The company indicated in its petition to OCDM that it wanted the Government to assure that this price would continue.

Mr. Hoegh said it would cost the Government about \$6,000,000 a year to buy directly Howe Sound's annual production of recoverable cobalt. He also figured a Federal subsidy to the industry would amount to \$1,400,000 "more or less," and that restrictive quotas or tariffs designed to assure the price asked by Howe Sound would cost domestic users of cobalt from \$4,250,000 to \$5,000,000.

The defense mobilizer ruled that Howe Sound's Calera operation "can not be said to be critical to the economic welfare of the nation," and that the U.S. "is in a favorable position to meet emergency requirements for cobalt." Government stockpiles of

the metal, he said, are already larger than objectives require.

The cobalt industry's chief problem since 1954, Mr. Hoegh asserted, has been the excess of supply over demand. "In view of the expansion programs under way," he declared, "the disparity in the supply-demand position will become more serious, unless there are increases in consumption."

## Action on Fluospar

Referring to fluospar, Mr. Hoegh said defense requirements could be met from other sources in North America such as Canada and Mexico. He stated there was no need for further Government purchases of the mineral for the Federal emergency stockpile.

The American Fluorspar Producers Association last October contended that imports of the material were endangering the domestic industry's ability to meet potential defense needs.

## Bar Aluminum Scrap Embargo

The Government also rejected a request by the Aluminum Smelters Research Institute for an embargo on exports of aluminum scrap. In turning down the plea submitted by Carl H. Burton, secretary of the Institute on July 28, 1959, the Department of Commerce found, after consulting representatives of smelters and scrap dealers, that there was "no need for action at the present time."

Agency representatives said that U. S. foreign trade in the material in question is running at about the same rate on an annual basis as it has in the past. They noted that there had been an increase in July exports but said this was due to a transaction, which amounted to about 1,000 tons, between a producer and its overseas affiliate, and the metal would not have gone to the smelters in any event.

## Brass Mill Imports Rise

Foreign trade in metals also made news when the Commerce Department reported that U. S. imports of brass mill products continued in increasingly larger quantities up to mid-year. As a group, imports of brass mill items reached a record high of 50,000,000 pounds in the second quarter. This represented 8 per cent of total U. S. demand (domestic shipments plus imports). For some products, the import impact was much greater. For example, seamless brass tubing imports during the second quarter represented 24 per cent of total demand; seamless copper tubing, 9 per cent; and copper sheet, 18 per cent.

The domestic copper industry also  
(Continued on Page 10)

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# State of the Light Metals

By D. A. RHOADES, President, Kaiser Aluminum & Chemical Corp.

IT IS somewhat difficult to talk about light metals, or any metals for that matter, at a time when the nation's metal operations have been so gravely disturbed. Many here are facing difficult situations in labor relations, operating schedules and dwindling inventories. Many fabricators desperately need metal.

One can only say, "When is the metals business ever normal?" If all of us decided to wait until everything settled down for a few years and we knew exactly what the score was, we would begin to suspect that we were in a rut. Then we would be unhappy too.

And of course, we would be in a rut! Change and crisis are but parts of the larger and constructive picture in American metals. Regardless of the day-to-day problems, the overall programs of our various metal industries have demonstrated that they all add up over the years to increased capacity, greater range and quality of products, and improved capability to service and support the ever expanding metal-working economy.

First, let us look at the statistics of the two principal light metals, magnesium and aluminum, during the past year.

In magnesium we have seen a steady recovery from the effects of the recent recession. In the opinion of A. W. Winston, Sr. of the Dow Chemical Company, who has very kindly provided these references to magnesium, consumption of this light metal in 1959 is expected to total 40,000 to 45,000 tons, or about 20 per cent higher than in 1958.

## Uses of Magnesium

The uses of magnesium are divided almost equally between military and commercial. On the military side, magnesium has established itself as a missile metal and is now being used in about 20 different missiles, including the Titan, Bomarc, Nike Hercules, Snark, Mace, Matador, Falcon and Ta'os. The Discoverer satellite's skin and fairings are fabricated entirely from magnesium and the skin of the Vanguard satellite likewise is magnesium sheet. An interesting aspect of magnesium missile development is the increasing use of the magnesium-

thorium alloys, which retain good mechanical properties at elevated temperature.

The decline in aircraft production has had a marked effect on magnesium consumption. The loss of consumption in aircraft has been only partially replaced by missile production.

Electronic equipment, ground support equipment and ground vehicles are other outstanding military applications of magnesium.

In the commercial area, the chief uses of magnesium are in luggage, tooling jigs and fixtures, materials handling equipment, portable tools, office machines, ladders and cameras. Development of an improved automatic metering die-casting process for magnesium has put this metal in a good position to compete in the automotive market. Magnesium has long since proved its structural adequacy in automotive applications, but volume use has been held up pending more favorable economics.

Magnesium also has many chemical and metallurgical uses, the most prominent of which is alloying with aluminum.

A major development in the magnesium industry since World War II has been the invention of new alloys. Magnesium alloys utilizing aluminum and zinc were widely used during the war and are still the backbone of the industry, but new compositions containing rare-earth metals, thorium, zirconium and even silver have been developed both in this country and in Britain. More than 30 basic magnesium alloys are now available in the United States, and many are available in more than one form or more than one temper.

A new primary magnesium producer, The Alabama Metallurgical Corporation, is expected to start production this year at Selma, Alabama. The new producer will use the ferrosilicon process and dolomite ore as does the New England Lime Company in its plant at Canaan, Connecticut. The Dow Chemical Company produces magnesium by electrolyzing magnesium-chloride cell feed, for which sea water is the raw material, at Freeport, Texas.

Now to move to the aluminum industry:

As a help in gauging the recent

rapid development of the aluminum industry in the United States, we may note that just nine years ago, in 1950, the reduction capacity of the three primary producers was 1.5 billion pounds. As of June 30, this year of 1959, primary reduction capacity in the United States is nearly 4.7 billion pounds, representing a 200 per cent increase. In addition, another one half billion pounds of new capacity is currently under construction, which will give the industry a total of 5.2 billion pounds of primary capacity to meet the needs of the existing market. Not only has capacity increased, but also the number of primary producers has doubled since 1950, from three to six.

## The Supply of Aluminum

Reflecting these expanded facilities, the U. S. aluminum supply picture has changed drastically over this period of time.

There are two sources of aluminum supply—primary, or virgin aluminum, produced from bauxite; and secondary aluminum, representing a recycling of scrap metal.

The supply of primary aluminum includes new metal produced domestically, as well as primary metal imported from other countries. As we did above in the case of capacity, let us look at the domestic primary aluminum production picture in the light of recent history. In 1950, 1.4 billion pounds of primary aluminum was produced in the United States in reduction plants capable of producing 1.5 billion pounds. The 1950 operating rate was, therefore, about 95 per cent of capacity. For the full year of 1959 it is anticipated that 3.9 billion pounds of primary metal will be produced by the industry in its newly enlarged facilities, currently capable of producing 4.7 billion pounds. The 1959 operating rate, therefore, is expected to be about 83 per cent of installed capacity.

The total aluminum supply picture is expressed by the following brief tabulation:

(Million lbs.)			
	Est. 1950	% 1959	Increase
Dom. Primary			
Alum. Prod. . . . .	1,437	3,930	173
Primary Imports. . . .	354	399	13
Sec. Recovery . . . . .	609	911	50

On the marketing side, shipments of all aluminum products in 1950 were 2.4 billion pounds, and ship-

Text of address delivered at American Mining Congress in Denver, Colorado, on Sept. 14, 1959.

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ments are expected to be just under 5 billion pounds this year. The total consumption of aluminum in the United States therefore has also more than doubled during this period.

The aluminum industry withstood fairly well the effects of the recession in the latter part of 1957 and in 1958. For the year as a whole, 1958 aluminum industry shipments were only seven per cent below 1957. One mill shape, extrusions, even showed an increase in 1958 over 1957. Shipments of aluminum products in the first quarter of 1959 were 45 per cent above the same period a year ago. The first quarter of last year was the low point in shipments for our industry. Shipments in the second quarter of 1959, due to increased consumption plus some buying based on the possibility of a strike in the industry, showed a 63 per cent gain over the second quarter of last year. Several major markets for aluminum, such as automobiles, trucks and trailers, residential construction, refrigerators, freezers and mobile homes, have been experiencing high production schedules in 1959, and the prospect is for continued high levels in production and demand.

Table I summarizes our outlook for the principal markets through 1965.

Three major characteristics will, in short, summarize the aluminum industry in the United States today. First, it is an industry which has expanded its primary production capacity to three times its capacity just nine years ago. Second, it has recovered rapidly from the 1957-58 recession; and, third, all elements of the industry are engaged in very active programs leading toward the development of new markets and the expansion of present markets—and among these markets are some of the nation's largest and most important industries.

#### Growing World Market

Beyond these characteristics, however, are certain other related circumstances that are worthy of comment. One of these is the growing free world market for aluminum, and the other is the great extent to which aluminum usage has penetrated in all of our metal working industries.

When we think and talk about world markets, we must also remember that we here in the United States are part of the so-called "world market." This part of that market has been receiving a good deal of attention from foreign producers and fabricators—particularly those on the European continent. We seem to detect an unfortunate imbalance here, for while we operate in this country with such reasonable controls that foreign fabricators can come in here with aluminum, pay the

**TABLE I**  
**Estimated Total Aluminum Shipments By Market**

Industry	1948	1958	Per Cent Gain		Per Cent Gain (Est.) 1958-1965
			1948-1958	1965	
Building .....	492	757	54	1,557	106
Electrical .....	214	468	119	1,446	209
Transportation .....	214	356	66	1,302	266
Consumer Durables .....	385	356	-8	856	140
Containers and Packaging .....	43	349	712	451	29
Machinery and Equipment .....	214	227	6	384	69
Deoxidizing and Destructive .....	85	194	128	225	16
All Other Uses .....	363	644	77	1,681	161
Total Commercial Shipments .....	2,010	3,132	56	7,900	152
Defense .....	128	468	266	500	7
Total Industry Shipments .....	2,138	3,600	68	8,400	133

freight and the duty and still sell substantially below our domestic market price at substantial profit, how is that situation consistent with the very rigid controls, high tariffs, and restrictive quotas which we find on many sides when we go about our own world marketing?

True, the reason behind this increasing under-priced importing is the low labor cost of these producers in Europe and Japan, and in many instances, direct or indirect subsidy by their respective governments. We have here a form of "double standard" of doing business—relatively open markets here for everyone who wants to come in and sell at lower price, based on very low labor costs, as against world markets for aluminum products closed to the United States.

That is inequity enough. We can look further and point out that these European producers are selling their aluminum products here in the world's largest metal-using market, toward the development of which they have contributed very little. We are not proposing any specific action for ourselves individually or for the industry collectively. These are simply comments on some of the characteristics of our business and our markets which are today having a direct effect upon our financial success and the stability of our respective businesses, and the personal security of our many thousands of employees.

#### Depth of Penetration

Now a few words about the depth of penetration which aluminum has achieved in our national production picture.

Those of us who are fully integrated back to the mine talk a good deal about that integration, and rightly so. What we sometimes overlook, although we deal with it every day, is the tremendous integration of aluminum as a material into the bulk of American production, both industrial and consumer. Aluminum is all around us. When you really think about it, it

is actually difficult these days to produce and merchandise a modern product, either for industrial use or consumer markets, without using aluminum in one way or another.

We can look at this improving penetration also as one of the principal reasons why aluminum has shown itself very sensitive in recent years to changes in general industrial production levels. As shown again in 1957-58, aluminum shipments were among the first indices to show a downward turn as this well known recession came upon us. Aluminum shipments also were among the first to begin an upward movement as business began to recover.

As a consequence of this characteristic, our industry perhaps more than other metals, must provide reserve capacity with which to meet sudden peaks in demand if industry is not to be denied adequate supplies when it needs them most.

This is, of course, a problem for individual company managements to meet, but it is an interesting and fundamental characteristic of our industry. The success of the aluminum industry in keeping its drastically expanded capacity operating at profitable levels, and the success of individual companies in maintaining earnings, depends directly upon sustained efforts to develop new aluminum markets. This does not necessarily mean completely new applications in which aluminum has never before been used; it also means many comparatively old applications which, through new methods of production, new alloys and new fabricating techniques, have become economically competitive.

#### Thoughts About Future

It would not be right simply to review the statistics of aluminum and to assess the industry's position today, without at least venturing a few thoughts about the future. These remarks must be identified with our organization as to source, rather than



the industry as a whole, although it is likely that others in the industry would be in general agreement.

As indicated in Table I, our own estimate of total domestic aluminum consumption in 1965, an estimate made as long ago as 1955, is something over 4-million tons, or 8-billion pounds. Although in establishing a 10-year forecast, no one can be specific as to what consumption will amount to in any individual year during the period, it is true that the estimated consumption for our present year of 1959 will fall pretty well on the rising trend line established by our forecast — in the area of 2.45 million tons, or 4.9 billion pounds.

It would be our general impression that were we to develop another 10-year forecast during the coming year, extending our estimates to the year 1970, such a study would also show continuing growth of an order not far different from that of the 1955-65 forecast — in fact not far different from the industry's overall growth rate since the turn of the century, during which time it has doubled, on the average, every ten years.

#### **Capacity to Be Short**

While there is a sizeable proportion of the world's aluminum production facilities not in operation at the present time, this is an advantage in the development of markets and the encouragement of new large volume applications. Therefore, the present situation in world aluminum production capacity is not a static one. We cannot say that we have the capacity to meet our markets into the indefinite future. The free world's total aluminum capacity is actually far short of that which will be required over the coming near-future years.

There is growing recognition that because of phenomenal increases in scientific and industrial research, the acceleration in tempo of transport and communication, the economic feasibility of constantly rising standards of living, and, not the least, the rapid growth in population — because of all these things, the world's extractive, fabricating and distributive industries are going to be pressed to the extreme to meet requirements.

To be able to mine and transport enough raw materials, to be able to produce and fabricate sufficient metal to meet the world's growing needs, the aluminum industry in the United States has extended itself very greatly over the past few years.

With expansion so much a "built-in" feature in today's aluminum industry, we can be confident that when the new and larger markets now under

development require increasing amounts of metal, the industry will provide the increased capacity to supply that metal.

## **Washington Report**

(Continued from Page 5)

continued at a high level of operations through the second quarter with increased deliveries both for current needs and the stepped-up demand in anticipation of a strike, the agency pointed out.

During the three months ended June 30, shipments of copper-base mill and foundry products were up for the third consecutive quarter. New supply of refined copper and copper-base scrap was at the highest level in three years.

#### **Deny Copper Disposal Rumors**

Although the copper industry operated at a high level in the first half, the strike which started in August has begun to put pressure on consumers. The mounting copper scarcity brought rumors that the Government was planning to release 75,000 tons of copper from the DPA inventory. A high Government official who would know if any such release was being contemplated, termed the rumor "unadulterated bunk."

Reverting to the 75,000-ton rumor, the Government official who termed it "bunk" pointed out that it would be political suicide to even suggest such release during a copper strike. He made these additional points:

In view of the political furor that was kicked up in March when the Office of Civil and Defense Mobilization planned to release 5,000 tons of copper a month from the 136,000 tons that the Government is carrying in the DPA inventory a tacit agreement was reached that a Senate Committee would be the first to be apprised if such sales were contemplated.

The only time that the Government would consider releasing such copper from the DPA stockpile would be if any defense orders could not be filled because of the unavailability of copper.

As long as copper was available, even from dealers, irrespective of price, the Government would not be justified in releasing copper from the stockpile.

Any release from the DPA stockpile is governed by Defense Mobilization Order V-3 which requires public announcement of any proposed sale, the quantity to be sold, the maximum

amount to be offered and at what price.

#### **Value of Stockpile**

The nation's total inventory of strategic materials was valued at \$5,780,000,000 on the basis of June 30, 1959, market prices, according to the OCDM. Of this amount, \$3,880,000,000 was applicable to the maximum objectives, which were valued at \$4,150,000,000, and \$1,900,000,000 represented excess inventories acquired, for the most part under previously higher objectives, OCDM said in reporting to Congress on stockpile activities in the period January 1, 1959, through June 30, 1959.

Commitments for open market purchases for the six-months' period, all of which were against basic stockpile objectives, totaled approximately \$1,300,000. There were no commitments for acquisitions from other sources.

Materials valued at approximately \$22,000,000 were delivered to the strategic stockpile under previous commitments.

Government commitments for strategic and critical materials in excess of maximum stockpile objectives were reduced by more than \$14,000,000 from January through June, OCDM said.

#### **Plan to Sell Zirconium**

In a move to cut stocks further, the General Services Administration announced that its Defense Material Service is preparing to sell on a sealed bid basis a quantity of zirconium ores consisting of approximately 1,300 short tons on baddeleyite and 7,000 short tons of zircon sand. The sales offer will be "where-is, as-is" f.o.b. carrier's conveyance. The minimum lot available is 120 short tons. The zircon sands are stored at various points but the baddeleyite is at Jeffersonville, Ind.

Offers to purchase will be received until 11 a.m., November 27, 1959. Further information concerning the sale of the zirconium ores can be obtained from George K. Casto, director, Projects Administration Division, Defense Materials Service, General Services Administration, Washington 25, D. C.

## **Aluminum Import Quota Set by Japanese Gov't**

The Japanese Ministry of International Trade and Industry (MITI) has announced in Tokyo it will authorize the import of 5,600 tons of primary aluminum during the current half (October-March) of the 1959-60 Japanese fiscal year to help alleviate a shortage of the metal in Japan.

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<i>Cadmium</i>	<i>Sulfur Dioxide, Liquid</i>
<i>Cadmium Oxide</i>	<i>Sulfuric Acid</i>
<i>Cadmium Sulfide</i>	<i>Tellurium</i>
<i>Copper</i>	<i>Thallium</i>
<i>Fluorspar</i>	<i>Thallium Sulfate</i>
<i>Germanium Concentrates</i>	<i>Zinc</i>
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TENNESSEE COPPER CO.**

# Outlook for Industrial Minerals

By C. HYDE LEWIS, President, New Idria Mining & Chemical Co.

**T**WO YEARS ago, in the "outlook for the metals" program, you were told that the Strategic metal industry in the United States was dying. Today it is dead.

As to antimony, a few years ago we supplied 40 per cent of our requirements. We now import 95 per cent and the 5 per cent we produce is a by-product of silver ores from Idaho, produced at no profit.

As to our source of supply, the combined production of the Western Hemisphere is no longer enough to supply our needs. Mexican production is down by 50 per cent. Bolivian production is down 50 per cent. Even our other source from the Free Nations, Africa, is down 50 per cent while China has increased its production by more than 100 per cent. We must presume that our Government plans to get its antimony from China in the event another emergency arises.

## Situation in Chrome

As for chrome, the producers of high grade metallurgical grade chromite in Alaska, Washington, Oregon and California have ceased operations, only a Montana chrome contract with the Government has a scant 6 months to run.

Our source of supply is now largely Turkey and the east coast of South Africa, and those producers are complaining bitterly because of importation of Russian chrome replacing their exports to the American market.

## Outlook for Cobalt

As to cobalt, up until this year we were producing close to 50 per cent of United States cobalt requirements. 1958 saw the shutting down of our only true cobalt mine in Idaho where, during the cleanup they were producing copper and letting the cobalt run down the creek.

As to our source of supply, it is largely African, where cobalt is distinctly a by-product which can and will meet any market price.

Our alternative is from Fidel Castro's Cuba, where our Government

has guaranteed some large loans which may or may not produce cobalt in times of emergency.

## One Columbium Property

As to columbium, one columbium property in Idaho provides the bulk of our United States supply under a Government contract which will terminate shortly. Our alternative source of supply is, again, largely Africa. If the columbium industry in the U. S. survives after the termination of the present Government contract, it will be in spite of rather than because of any Government action.

## Manganese Contracts

As to manganese, the Government contracts for the production of manganese in the U. S. terminated on August fifth. Unless something has happened within the last week or so, I doubt if there is any appreciable metallurgical grade manganese produced in the U. S. today. Our supply will come largely from Brazil and India.

## Mercury Prospects

As to mercury, according to the U. S. Tariff Commission, U. S. mercury production during 1957 and the first half of 1958 was produced at an overall loss, and even that loss did not include several million dollars worth of unsuccessful exploration and development, not included in the Tariff Commission report.

The Government's mercury purchase program ended with the ending of 1958 and, instead of costing the Government anything, the bulk of the purchases were utilized by other agencies of the Government and our Government made a net profit on the deal.

Production in 1959 will be some 20 per cent below that of 1958. The fact that it remains that high is in spite of and not because of any Government planning. Our Government has almost exclusively patronized foreign cartels in the procurement of stockpile and AEC requirements.

Our present mercury requirements come from Mexico, Italy and Spain where labor costs range 5 per cent

and 25 per cent of American labor costs.

## Tungsten Output Vanishing

As to tungsten, the Bureau of Mines has ceased giving any domestic production figures. At least one mine in the country is producing by-product tungsten, maybe two mines are, but certainly our domestic production will not take care of much more than 10 per cent of our peacetime requirements and 2½ per cent of the Korean war desired requirements. In spite of the fact that all of our Defense Department needs are running into higher and higher temperature requirements Western Hemisphere production of tungsten is declining toward the vanishing point.

Will we have another "Korea" with no carbide cored anti-tank projectiles, or some other corresponding lack of this high temperature material which will again emphasize the old saying regarding the horseshoe nail and the loss of military campaign?

## Statement by Seaton

The strategic metal industry as a whole has had, over the last few years, hope in the promise of President Eisenhower of a "healthy domestic mining industry." Now, we know what U. S. policy is in regard to the strategic metals and it can probably be best set forth in words by quoting Secretary of the Interior Seaton in his letter to Senator Murray:

"As a general premise we believe that we should not directly subsidize or otherwise support, a domestic mineral industry without defense justification or in the absence of a reasonable anticipation that through research or through increased requirements, the producing industry will become fully commercial."

We have finally adopted the policy of Harry Dexter White — we are leaving our minerals in the ground and relying on overseas sources which would not be available in times of emergency.

I hope this destruction of a whole industry haunts both political parties in 1960.

Text of address delivered at American Mining Congress in Denver, Colorado, on Sept. 14, 1959.



# U. K. COPPER PRICES ADVANCE AS STRIKES RESTRICT SUPPLIES; EXPECT CONSUMER BUYING TO RISE IN '60

Tin Prices Move in Narrow Range but General Direction Is Upward; Lead Continues Steady With Supplies Ample; Firmer Tone Noted in Zinc Market

October 6, 1959

IT IS, perhaps, not surprising that outside observers of the copper market often find it very difficult to understand. It would be difficult to explain, for example, why the copper price is, if anything, slightly less than it was a month ago at the time of writing although since then the world has lost perhaps 100,000 short tons of American production owing to the strike and is now faced with the absence of the very substantial Braden Co.'s production from El Teniente (in Chile) owing to a strike there. Meanwhile, it is true that the persistence of the steel strike in the United States is beginning to cause some anxious enquiries, at this time, as to how much longer this can last without seriously affecting the general economic level in the U. S. A. but elsewhere the economic pointers are favorable and certainly in Europe the trend of copper consumption appears to be upward.

In Britain, at the moment, the outlook has to be viewed through the

By L. H. TARRING  
London, England

question mark of what is going to be the outcome of the General Election. Both the public opinion polls and political commentators seem to regard the result as a very open question. However, provided nothing happens politically to shake industrial and commercial confidence, either here or abroad, it looks as if the final quarter of the year should be quite a good one and 1960 seems to hold a fair amount of promise.

Perhaps the answer to the apparent conundrum over prices lies in the fact that the long-awaited strike was discounted to a very large extent before it actually occurred. For a time, after production at such a large proportion of America's capacity was brought to a standstill, people's minds turned to the probable position when the strike was over.

As the broad outlook in conditions of unfettered production is still one of a plentiful supply of copper, even on the basis of a buoyant level of consumption, this resulted in prices drifting downwards. When, however, it became apparent that both the steel and copper strikes in America were lasting longer than had been anticipated, American demand for supplies in Europe gradually increased and a fair amount of metal flowed from this country to the U. S. A. The closure of the Braden properties had a more direct impact on the European situation and the London market jumped up £6 in a day when the strike actually occurred.

The impact of this stoppage, however, was perhaps to some extent cushioned by the almost simultaneous dockers' strike on the Eastern Atlantic seaboard which, of course, meant that the American demand for prompt copper could not be implemented by purchases in Europe for the time being. The U. S. dock strike, however, was short-lived. So far, consumer demand in Europe has not been in any

way outstanding but it is noticeable that many of the leading consumers have been taking up larger tonnages of metal within the terms of their period contracts.

Discussions are now under way between some of the leading producers and their European customers with regard to 1960 contracts and the early indications are that consumers are looking forward to requiring more copper next year than during 1959. Just recently, U. K. consumers have been informed of the reaction of the three big African producing groups to the memorandum that British fabricators sent to producers earlier this year on the latter's proposals for a managed price for period contracts instead of the present London Metal Exchange basis. Details of the producers' latest comments have not been disclosed but it is believed that whilst they met some of the points raised by consumers they did not vary much in essence from earlier proposals and in consequence it remains doubtful whether agreement on this very con-

## U. K. COPPER STATISTICS

U. K. production of refined copper in July was 6,230 tons of primary and 6,011 tons of secondary compared with the June totals of 10,856 tons of primary and 8,210 tons of secondary, according to the British Bureau of Non-Ferrous Metal Statistics. Stocks of refined copper showed a slight decline to 69,049 tons (69,945 tons revised) but blister showed an increase to 12,937 tons (10,532 tons). Of the refined stock consumers held 35,650 tons (34,181 tons). Details of consumption are as follows:

6 months ending—			
	July 1959	July 1958	July 1957
Unalloyed Copper Products:			
Wire*	12,396	163,282	123,713
Rods, bars & sections	1,240	12,492	11,219
Sheet, strip & plate	4,599	33,374	33,462
Tubes	5,829	36,081	37,757
Castings & misc.	650	4,550	4,550
Alloyed Copper Products:			
Wire	1,360	9,079	10,049
Rods, bars & sections	10,504	69,705	77,191
Sheet, strip & plate	8,357	52,877	58,383
Tubes	2,156	14,112	12,629
Castings & misc.	5,720	42,897	42,365
Copper sulphate	3,200	14,909	24,432
Total all products	56,011	453,358	435,660

Copper content of output	44,572	382,030	352,781
refined copper†	32,034	301,591	264,891
Consumption of copper & alloy scrap‡ (copper content)	12,538	80,339	87,890

\* Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.

† Virgin and secondary refined copper.

‡ Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

## U. K. TIN STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, consumption of tin during July fell to 1,682 tons compared with 1,987 tons the previous month. Production rose to 2,735 tons (plus 30 tons secondary) against June figures of 2,267 tons (32 tons) whilst stocks in the U. K. at the end of July showed an increase to 11,255 tons from the June figure of 9,638 tons. Details of consumption of primary tin are given below:

—6 months ending—			
	July 1959	July 1958	July 1957
Tinplate	801	5,536	5,874
Tinning:			
Copper wire	38	301	321
Steel wire	7	55	60
Other	65	425	456
Total	110	781	837
Solder	198	1,007	1,279
Alloys:			
Whitemetal	227	1,640	1,721
Bronze & gunmetal	151	1,353	1,140
Other	37	241	247
Total	415	3,234	3,108
Wrought Tin*			
Foil & sheets	22	163	189
Collapsible tubes	18	152	132
Pipes, wire & capsules	2	23	23
Total	42	338	344
Chemicals†	116	590	814
Other uses‡		63	
Total all trades	1,682	11,549	12,256

\* Includes Compo and "B" metal.

† Mainly tin oxide.

‡ Mainly powder.

# AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC (Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
1954 Averages	£ s. d. 248 17 11	£ s. d. 239 17 7	£ s. d. 249 0 11	£ s. d. 719 8 11	£ s. d. 709 17 7	£ s. d. 720 6 7	£ s. d. 98 8 12	£ s. d. 94 7 4	£ s. d. 78 5 4	£ s. d. 77 16 11
1955 Averages	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	99 13 4	98 12 3
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7
1957 Averages	219 8 10	221 0 3	219 12 10	754 15 4	747 10 10	755 3 11	96 12 9	96 13 2	81 11 7	80 1 1
1958 Averages	197 13 3	197 9 3	197 16 11	734 18 6	734 17 11	735 6 1	72 15 8	73 6 10	65 17 12	65 10 12
1959										
January	230 2 0	227 5 10	230 5 0	758 15 6	759 4 9	759 2 10	71 17 0	72 3 3	74 17 8	72 18 8
February	236 4 2	235 10 8	236 7 6	772 9 9	773 9 0	772 15 0	69 19 4	70 16 6	73 13 8	71 19 8
March	248 10 3	247 12 2	248 13 6	779 14 9	783 5 9	780 1 6	69 10 3	71 4 2	75 2 5	73 18 8
April	240 0 5	240 6 6	240 3 5	782 5 3	783 15 5	782 11 4	69 1 0	70 8 4	72 13 9	72 9 2
May	236 4 2	236 11 6	236 6 9	784 4 3	784 10 9	784 10 0	70 16 0	71 13 10	77 7 1	75 17 6
June	230 0 11	230 0 4	230 3 8	788 7 9	789 8 10	788 14 1	69 13 4	71 5 8	78 8 2	77 6 11
July	220 17 6	221 14 9	221 0 3	792 6 6	790 16 4	792 13 6	70 5 0	71 1 2	80 10 7	79 13 4
August	232 16 9	231 9 3	233 0 0	792 18 6	791 18 3	793 4 6	72 3 3	73 3 1	85 5 11	83 19 5
September	230 7 6	230 8 8	230 10 3	792 15 0	792 6 4	793 0 5	70 14 5	72 1 10	86 1 5	84 19 10

troversial subject is likely in the near future.

## Tin Moves in Narrow Range

Tin prices on the London market have moved very narrowly during the past month or so but such movement as there has been has been in an upward direction. Indeed, prices have touched the highest level since February 1957. Considering that the American steel strike has continued longer than most people had anticipated and inevitably cast a shadow over the tinplate industry there, the larger fourth quarter quotas which are now in operation seem to have had singularly little effect on the open market.

For a few days towards the end of September, the Eastern price sagged in an anticipatory fashion but London held fully steady and the Eastern market has recovered again, despite the larger daily tonnages which are being marketed there. American buying of tin has, in fact, been in evidence from time to time and this, coupled with a good level of European enquiry and steady home buying here has sufficed to keep the market fully steady.

The Buffer Stock Manager, of course, is currently in a position to either buy tin or sell it as his policy dictates but it is doubtful whether he had had to intervene on any substantial scale in recent weeks. It is interesting to note from the Russian trade returns which have recently become available for 1958 that during that year the Soviet Union exported 22,300 tons of tin, compared with 18,300 tons in 1957.

As imports in 1958 were only 19,400 compared with 22,000 tons the previous year, Russia apparently became a net exporter of tin last year to the tune of nearly 3,000 tons. Of the total exports, 6,600 tons went to the U. K. and 7,700 tons to Holland. It will probably be a considerable time before official figures for 1959 are available but indications so far are that Russian shipments to the western hemisphere this year have been on a

somewhat smaller scale and the market is certainly much less apprehensive on this score than was at one time the case.

## Lead a "Cinderella"

Lead continues the Cinderella of the main metals with no immediate indi-

## U. K. LEAD STATISTICS

Lead stocks in the U. K. at the end of July were 67,586 tons (58,661 tons imported and 8,925 tons of English refined) against 57,810 tons (47,185 tons and 10,625 tons) in June, according to the British Bureau of Non-Ferrous Metal Statistics. Production during July fell to 6,567 tons compared with 8,222 tons a month earlier. Full consumption details are given below:

	—6 months ending—		
	July 1959	July 31, 1958	July 31, 1959
Cables	6,465	59,816	54,562
Batteries—as metal	2,296	17,376	16,811
Battery oxides	2,194	16,243	15,460
Tetraethyl lead	1,837	11,150	13,542
Other oxides			
& compounds	2,480	15,060	15,497
White lead	582	5,304	4,608
Shot			
(incl. bullet rod)	299	2755	2,286
Sheet & pipe	6,301	38,451	39,587
Foil & collapsible tubes	251	2,513	2,041
Other rolled & extruded	530	3,337	3,795
Solder	1,360	7,884	8,474
Alloys	1,088	10,876	10,504
Miscellaneous uses	1,168	7,305	7,846
Total consumption	26,851	198,069	195,013
of which:			
Imported virgin lead	14,338	99,105	100,984
English refined	5,652	44,932	41,896
Scrap including remelted	6,861	54,032	52,133

## U. K. ZINC STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics zinc stocks during July fell slightly to 37,427 tons against 38,297 tons a month previously. Of this total consumers held 17,720 tons. Production fell to 5,507 tons compared with the June figure of 7,437 tons. Consumption details are given below:

	—6 months ending—		
	July 1959	July 31, 1958	July 31, 1959
Brass	8,464	55,794	61,202
Galvanizing:			
of which:			
General	7,152	50,858	55,441
Sheet	2,710	19,456	19,246
Wire	1,679	11,228	14,265
Tube	1,337	12,380	11,503
Rolled zinc	1,426	7,794	10,427
Zinc oxide	1,711	14,523	14,043
Zinc diecasting	2,236	15,868	16,600
& forming alloy	4791	28,952	31,064
Zinc dust	1,100	6,913	6,837
Miscellaneous uses	864	6,467	6,533
	26,318	178,475	191,520
of which:			
Slab zinc			
High purity (99.99%)	5,366	31,722	33,742
Electrolytic & high grade (99.95%)	4,621	34,380	35,997
G.O.B. Prime Western & debase	9,136	63,969	70,080
Other virgin material	163	1,851	1,414
Remelted zinc	486	3,065	3,317
Scrap—(zinc content)			
zinc metal, alloys & residues	2,741	18,452	19,280
Brass & other copper alloys	3,805	25,086	27,690

cation of any fairy godmother to wave a wand and substantially improve the demand for it. The fact that the American statistical position is being steadily strengthened by virtue of the loss of production due to strikes, continues to have little or no effect on market sentiment on this side of the Atlantic owing to the barrier that has been built up as a result of the U. S. import quotas.

Consumption on this side seems to be fairly steadily maintained but everything points to the fact that even on the present basis of somewhat restricted supplies to the world market there is plenty of lead for all actual consumption needs.

The prevailing price level is definitely not very attractive to producers but pending some new developments it looks as if values might continue somewhere in close proximity to £70 a ton for some little time to come.

It is interesting to note that during 1958 the Soviet Union was a net exporter of about 30,000 metric tons of lead. Total exports were 62,200 tons, but imports amounted to 32,200 tons. So far as is known the exports went mainly to Iron Curtain countries.

## Zinc Demand Good

The general situation with regard to zinc has not changed very much in recent weeks. Compared with a month ago, of course, the U. S. domestic price has risen but this had little or no effect on the European market. Demand for zinc here is generally quite good and the consumption prospects seem to be fairly favorable.

Indeed, nearby metal is none too plentiful and on October 6 U. K. and Commonwealth suppliers of special high grade metal increased their premium over the London Metal Exchange price from £7 to £9 a ton. Supplies from other sources had been selling at around the latter figure prior to this change. All the main zinc consuming trades are experiencing fairly active trading at the present time outside America. It looks as if zinc is moving into a gradually strong-

(Continued on Page 16)



# STRIKES CONTINUE STRANGLEHOLD ON COPPER SUPPLY; REFINED STOCKS DROP TO A DANGEROUSLY LOW LEVEL

## Shortages Put Heavy Pressure on Red Metal Price Structure; Lead Remains Quiet And Steady; Zinc Very Firm; Heavy Tin Buying Seen After End of Steel Shutdown

October 16, 1959

**S**TRIKES continued their stranglehold on the copper market during the month in review. With refined copper stocks dwindling to a dangerously low level, consumers will face severe metal shortages, with resultant pressure on the price structure. So far, at least, copper prices have held within the previously established range — producers at both 30.00c and 31.50c a pound delivered, with the one custom smelter in operation quoting 33.00c for domestic metal, plus another 1.70c a pound to cover the import duty if the metal is of foreign origin. Lead remained quiet and steady at the 13.00c New York level and zinc was firm at 12.00c for the Prime Western grade at East St. Louis.

### Refined Stocks Drop

Some factors in the copper trade, after analyzing the domestic statistics for September, expressed the fear that a squeeze might develop even after the strikes in the industry are over, and especially if some fabricators are faced with a LIFO problem. In the opinion of some trade members, the statistics were "frighteningly" bullish, "frighteningly" in the sense that they seem to indicate a real shortage. If for any reason there should be a rush to buy copper for November or even December delivery, the outside market price could easily be pushed up by several cents a pound simply because the physical supply of copper is negligible.

For the first time in the memory of some of the older members of the industry, the stocks of copper in producers' hands were smaller than non-industry stocks. The total domestic stocks at the end of September were 61,524 tons, 30,084 tons less than at the end of August. Of the 61,524 tons, only 26,398 tons consisted of refined stocks in the hands of domestic producers and 35,126 tons represented the stocks of all grades of copper that are carried by the Commodity Exchange and others. The sharp drop in stocks is due to the strikes that have cut domestic mine output by about 75 per cent.

September primary output was only 19,166 tons, a drop of 32,161 tons from August. Domestic refined production

### ZINC PRICE UP $\frac{1}{8}$ c TO 1c; SMELTER WITHDRAWS COPPER QUOTATION

Several sellers boosted zinc prices 1.00c to 13.00c a pound for Prime Western at E. St. Louis on Oct. 21, with the remaining sellers going to 12.50c on Oct. 23. Custom smelter copper quotations were withdrawn on Oct. 23.

dipped to 28,847 tons whereas in the pre-strike period, January-July, the monthly average was 138,000 tons.

Least affected by the strike have been the deliveries of refined copper to domestic consumers; 92,501 tons in September as against 90,123 tons in August.

### Foreign Statistics

Outside the U. S., primary production, deliveries to fabricators and refined stocks were smaller in September than they were in August. Primary output in September was 167,048 tons, a drop of 14,569 tons from August. September refined production of 142,646 tons showed little change from August's 142,276 tons. Foreign deliveries in September were 139,781 tons, a decrease of 8,040 tons from August. At the end of September, the foreign refined stocks were 275,100 tons, a reduction of 9,440 tons.

### Strike Front

On the strike front Kennecott and the International Union of Mine, Mill and Smelter Workers have been negotiating with indications of some progress having been made although both sides are reported still far apart. Further talks are scheduled between Kennecott and Mine, Mill. Kennecott also has had discussions with the United Steelworkers union but they have been mainly of an exploratory nature. Kennecott was having labor difficulties in Chile too, where the Braden El Teniente mine was closed by a strike on October 1. El Teniente had been producing about 16,000 tons of copper a month. Negotiations to end the strike at El Teniente have been taking place with some progress reported. Anaconda also was scheduled to meet with the Mine, Mill union.

Strikes that came and went during the month in review included the walkout by domestic longshoremen on the Atlantic and Gulf Coasts, and a strike of African transport workers in the Belgian Congo. A Taft-Hartley in-

junction halted the eight-day domestic dock strike with labor peace on the piers assured until December 28.

### Copper Prices Firm

Copper prices were firm, at 30.00c and 31.50c for producers and 33.00c for custom smelter metal of domestic origin and 34.70c for foreign origin copper. The smelter's scrap copper buying prices on October 14 were increased 0.25c to a basis of 25.00c for No. 2 heavy copper and wire. In the outside market dealers were asking close to 36.00c a pound for spot delivery.

Of passing note was another rumor, prevalent on October 7, that the Government was planning to release 75,000 tons of copper from the DPA inventory. A high Government official, who would know if any such release was being contemplated, immediately termed the rumor "unadulterated bunk." He also pointed out that it would be political suicide to even suggest such a release during a copper strike.

### Brass Ingot Range Disappears

A leading producer of brass and bronze ingots on September 23 rescinded price advances of 1.00c to 2.00c a pound, depending on alloy, it had posted on September 3. Since other import ingot makers did not take similar price action on September 3, a range had existed from that date until September 23. All leading makers on September 23 were pricing their brass and bronze ingots at levels established on July 7 and which had remained in effect until September 3.

### Lead Market Steady

Lead consumers continued to follow a very conservative buying policy, keeping their purchases low in order to further reduce their inventories. Since they have been following this policy for several weeks, producers felt confident that consumer's stocks have been pared down and that their purchases for November shipment will show a marked improvement over those for October.

The light consuming demand did not upset the market's balance. The price was firmly maintained at 13.00c New York and at 12.80c St. Louis. A good portion of the limited business

also was booked at the monthly average.

#### **Zinc Price Firm**

Zinc producers have been doing a moderate volume of business. Recent orders, principally for carloads, were placed for November shipment. Both Prime Western and Special High Grade were moving. The orders were about equally placed at the spot quotation of 12.00c a pound East St. Louis for the Prime Western grade, and the monthly average.

With the prospects of a settlement of the steel strike a little more hopeful than they have been up to the present, the outlook for larger zinc shipments is more encouraging, although no rush of new business is expected even after the mills get back into full production. There are deferred shipments of zinc due consumers, in addition to recent heavy purchases.

#### **Zinc Statistics in Sept.**

The zinc statistics for September made an exceptionally good showing considering that the steel strike had cut off the major outlet for Prime Western metal. Shipments of all grades of zinc in September amounted to 61,185 tons as compared with 59,782 tons in August. Production of all grades dropped to 62,202 tons in September from 69,768 tons in the preceding month, while stocks of all grades in producers' hands at the end of September rose slightly to 193,036 tons from 192,019 tons at the end of August.

#### **Tin Outlook**

Heavy buying of tin at the end of the strike in the steel industry is unlikely, according to leading factors in the tin trade. The outlook for an end to the strike is more promising at this writing. But resumption of operations by the steel industry is not expected to bring about any heavy buying by tin platers for two reasons. First, the tin platers are reported to have around two and perhaps as much as three months' supply of tin in the warehouses. If the strike is ended, they will want delivery of these warehouse stocks' first. Second, some quarters feel that if the steel strike is ended by a Taft-Hartley injunction, the mills may work only for 80 days with the possibility of another strike at the end of that period.

The New York price for spot Straits tin on October 15 was 102.25c a pound as against 102.87½c for September 17, the last previous quotation in this space. During the September 17-October 15 period, the high of 103.37½c was registered on October 5, in the midst of the domestic dock

strike. The low of 102.25c occurred on October 15.

#### **Turmoil in Aluminum**

Sharp price reductions on aluminum products by the large primary producers make continuance in the business almost impossible for independent fabricators. Alcoa on October 2 cuts its aluminum building sheet prices to a level where other sellers had to cut their quotations about 15 per cent to remain competitive, independent fabricators reported. Primary producer circles said that the lower prices were not intended to hurt any aluminum company but to make aluminum sheets and other products more competitive with galvanized sheet.

The primary producers maintained their 30-pound aluminum ingot, 99.5 per cent plus grade, at 26.80c a pound, f.o.b.

#### **Cadmium Price Higher**

A large producer of cadmium sticks, bars and platers' shapes announced an advance in price of 10.00c a pound to a basis of \$1.40 a pound in lots of up to one ton, effective October 1. Other producers followed. The advance was attributed to dwindling supplies and increased costs.

#### **Quicksilver Up \$1**

Quicksilver was quoted at \$224 to \$226 per flask of 76 pounds on October 8, a rise of \$1 from the previous range of \$223 to \$225, established on September 16. The firming up was attributed to the dock strike in effect at that time and which was blocking imports of the metal, rather than to any increase in demand from domestic consumers.

#### **Silver Steady**

The New York silver quotation was steady at the 91.37½-an-ounce level in effect since September 3, following a decline of 0.25c an ounce.

#### **Booklet on Magnet Wires Issued by Anaconda Wire**

Anaconda Wire and Cable Company had announced a new publication to help manufacturer, maintenance and repair firms choose the correct magnet wire for Hermetic Motors. Titled "Enamled Magnet Wires for Hermetic Motor Applications," the 19-page booklet includes a comprehensive table of test data for each of the types of insulation Anaconda recommends for hermetically sealed motor service. These are Anavar, Anatherm, Epoxy, Formvar, and Lecton.

Copies of the booklet may be obtained by writing to Anaconda Wire and Cable Company, Dept. EFL, 25 Broadway, New York 4, New York.

### **British Metal Markets**

(Continued from Page 14)

er position on the basis of the present somewhat restricted level of supplies.

The undertakings given by a number of producers earlier this year to curtail their sales on the world market are thought to be binding only until the end of the year and it seems quite on the cards that from early in 1960 some of them may step up their offerings on the world market. As, in some cases at any rate, it is sales and not production that has been curtailed, there may be some useful reserves in producing countries which can be put on the market if necessary. It is impossible to pre-judge this situation, however, as steps may be taken to call a meeting of the International Tin Study Group or even of the United Nations Lead and Zinc Committee before the end of the year although it begins to look as if this may be a little doubtful.

During 1958 the Soviet Union exported 66,400 metric tons of zinc against 72,200 tons in 1957 and imported 31,400 tons against 32,500 tons. The net export position was thus much the same as in lead except that a good deal of the zinc went to Western European countries. For instance, 17,900 tons (against 22,000 tons in 1957) was shipped to the U. K., 1,000 tons to France, 1,000 tons to West Germany (against 5,200 tons the previous year), 2,900 tons to Sweden and 10,700 tons (against only 1,800 tons in 1957) to the Netherlands.

#### **Titanium Ingot Production Decreased During August**

**Washington** — Production of titanium ingot totaled 492,348 pounds in August, compared with 641,460 pounds in July, according to the Department of Commerce. Domestic consumption totaled 320,342 pounds in August against 573,405 pounds in July.

The production of titanium mill products in August totaled 295,325 pounds and consisted of 103,882 pounds of sheet, plate, and strip; 149,170 pounds of forging and extrusion billet, and 42,273 pounds of rod, bar, and wire. July production was 362,860 pounds, of which, 112,799 tons were sheet, plate and strip; 186,612 pounds, forging and extrusion billet, and 63,449 pounds, rod, bar and wire.

# Daily Metal Quotations for September, 1959

The following quotations are taken from the Daily Metal Reporter\*  
(In Cents Per Pound)

SEPT OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN
--

\* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.



# United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

## COPPER

**NOTE** — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	1.70c lb.
Copper ore and concentrates, product of Cuba, copper content	free
Copper ore and concentrates, product of Philippines, copper content	0.17c lb.
Copper ore and concentrates, copper content	1.70c lb.
Regulus, black, or coarse copper, and cement copper, copper content	1.70c lb.
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	1.70c lb.
Refined copper in ingots, plates or bars, copper content	1.70c lb.
Copper rolls, rods or sheets	1 1/4c lb. (plus 1.70c lb. †)
Copper seamless tubes and tubing	3 1/4c lb. (plus 1.70c lb. †)
Copper plain wire	12 1/2% (plus 1.70c lb. †)
Copper brazed tubes†	4.50c lb. (plus 1.70c lb. †)
Old and scrap copper, fit only for remanufacture: and scale and clippings, copper content	1.70c lb.

†† Copper content.

## BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12 1/2%

## LEAD

**NOTE** — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	3/4c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire, lead content	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1 1/4c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

## ZINC

**NOTE** — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	3/4c lb.
Dross and skimmings	3/4c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	7 1/2c lb.

Zinc dust	7/10c lb.
Zinc die-casting alloys	12 1/2%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

## MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.25c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.50c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	1/4c lb.
Antimony oxide	1c lb.
Antimony sulphides	1/2c lb. & 12 1/2%
Arsenic, metallic†	2.50c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	1/4c lb.
Bismuth	1 1/8%
Bismuth salts and compounds	35%
Beryllium metal†	21%
Beryllium ore	free
Cadmium	3 3/4c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	10 1/2%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	50%
Magnesium powder, sheets, wire†	17c lb. & 8 1/2%
Magnesium alloys	20c lb. & 10%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	1/4c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	30c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1 1/4c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12 1/2%
Nickel scrap	free
Nickel tubes, tubing	6 1/4%
(if cold rolled, drawn or worked — 2 1/2% extra)	
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than 1/8 in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12 1/2%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

\*Crude bauxite import duty suspended through July 15, 1960. \*\*Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 through July 15, 1960. †Tariff reduced 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

# Copper Statistics Reported by Copper Institute

## Combined Totals in U. S. A. and Outside U. S. A.

	Crude Production		(In tons of 2,000 pounds)			Stock Increases or Decreases		
	Primary	Secondary	Refined Production	Deliveries to Customers	Refined Stock End of Period	Blister	Refined	Total
1957								
Total .....	2,897,719	123,270	3,035,588	2,853,307	458,340	-14,599	+103,920	+89,321
1958								
September .....	202,719	7,960	204,006	254,667	374,180	+ 6,673	-60,948	-54,275
October .....	204,938	20,613	192,199	292,630	269,654	+33,352	+105,126	-71,774
November .....	227,916	17,755	230,109	261,097	236,774	+15,562	-32,880	-17,318
December .....	253,512	8,883	282,191	260,841	258,874	-19,796	+22,100	+ 2,304
Total .....	2,707,926	138,696	2,805,622	2,916,588	258,874	+41,000	-199,466	-158,466
1959								
January .....	257,682	12,377	270,995	248,574	284,545	- 936	+22,001	+21,065
February .....	244,405	12,737	264,018	243,741	304,303	- 6,876	+19,578	+12,882
March .....	270,248	17,019	285,425	270,768	319,241	+ 1,842	+14,938	+16,780
April .....	265,937	15,653	278,959	270,262	329,871	+ 2,631	+10,630	+13,261
May .....	279,629	11,695	283,024	266,378	350,343	+ 8,300	+20,472	+28,772
June .....	277,855	12,347	284,420	294,232	345,429	+ 5,782	- 4,914	- 868
July .....	256,729	9,198	274,752	231,138	374,519	+16,583	-15,035	+ 1,548
August .....	232,944	4,552	223,452	237,944	389,554	+16,583	-15,035	+ 1,548
September .....	186,214	7,651	171,493	232,282	336,625	+22,372	-39,524	+17,152

### In U. S. A.

1957								
Total .....	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
August .....	67,917	8,999	100,640	86,982	215,560	.....	-27,221	.....
September .....	79,541	7,259	107,971	101,971	178,222	.....	-37,338	.....
October .....	92,214	19,865	113,288	120,793	128,490	.....	-49,732	.....
November .....	96,369	16,755	128,048	131,188	93,596	.....	-34,894	.....
December .....	97,641	7,911	146,978	116,310	80,722	.....	-100,302	.....
Total .....	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	-12,874	.....
1959								
January .....	95,542	11,284	137,361	114,425	80,780	.....	+ 58	.....
February .....	88,432	11,425	142,235	120,134	85,523	.....	+ 4,743	.....
March .....	101,410	16,120	140,928	124,220	85,952	.....	- 2,751	.....
April .....	98,376	14,287	137,490	135,233	74,323	.....	- 8,629	.....
May .....	104,236	9,933	135,031	135,135	86,132	.....	+11,809	.....
June .....	99,419	11,352	138,403	150,117	85,674	.....	- 458	.....
July .....	81,662	8,323	134,020	108,127	103,432	.....	+17,558	.....
August .....	51,327	3,994	81,176	90,123	91,608	.....	-11,824	.....
September .....	19,166	6,577	28,847	92,501	61,524	.....	-30,084	.....

### Outside U. S. A.\*

1957								
Total .....	1,783,119	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
August .....	156,756	475	117,274	160,134	220,916	.....	-11,467	.....
September .....	123,178	701	96,035	153,633	196,558	.....	-23,610	.....
October .....	112,724	748	78,911	171,827	141,164	.....	-55,394	.....
November .....	131,334	980	102,061	129,909	143,178	.....	+ 2,014	.....
December .....	155,871	972	135,213	144,531	178,152	.....	+34,974	.....
Total .....	1,699,756	7,402	1,359,082	1,737,172	178,152	.....	-99,164	.....
1959								
January .....	162,140	1,093	133,634	134,149	203,765	.....	+21,943	.....
February .....	155,973	1,312	121,783	123,607	218,780	.....	+15,015	.....
March .....	168,838	899	144,497	146,548	236,232	.....	+17,502	.....
April .....	161,561	1,366	141,469	135,029	255,548	.....	+19,259	.....
May .....	175,393	1,762	147,993	131,243	264,211	.....	+ 8,663	.....
June .....	178,436	995	146,017	144,115	259,755	.....	- 4,456	.....
July .....	175,067	857	140,732	123,011	286,122	.....	+26,367	.....
August .....	181,617	558	142,276	147,821	284,540	.....	- 2,196	.....
September .....	167,048	1,047	142,646	139,781	375,100	.....	- 9,440	.....

\* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

### Electrolytic Copper

#### Producers' Price, Del. Valley

#### Monthly Average Prices

(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	44.03	33.318	25.00	29.972
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	31.50
June	46.00	30.955	25.36	31.50
July	41.56	29.25	26.125	30.587
Aug.	40.00	28.639	26.50	30.00
Sept.	40.00	27.031	26.50	30.571
Oct.	39.308	27.00	27.548	.....
Nov.	36.00	27.00	29.00	.....
Dec.	36.00	27.00	29.00	.....
Aver.	41.992	30.183	26.31	.....

### Electrolytic Copper

#### Custom Smelters' Price, Del. Valley

#### Monthly Average Prices

(Cents Per Pound)

	1956	1957	1958	1959
Jan.	50.22	34.87	24.577	29.429
Feb.	52.07	32.273	23.557	30.361
Mar.	53.11	30.952	23.326	33.21
Apr.	48.88	31.24	23.66	32.84
May	44.221	30.163	23.865	32.00
June	40.00	29.60	25.52	31.477
July	38.14	28.39	29.231	29.52
Aug.	39.32	27.862	26.52	30.056
Sept.	39.00	25.948	26.355	33.00
Oct.	37.192	25.722	28.577	.....
Nov.	35.95	25.435	29.829	.....
Dec.	35.45	25.26	28.846	.....
Aver.	42.797	28.93	25.905	.....

### Lake Copper

#### Producers' Price Delivered

#### Monthly Average Prices

(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	43.783	33.182	25.00	30.00
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	31.50
June	46.00	30.955	25.00	31.50
July	41.68	29.25	25.75	30.587
Aug.	40.00	28.611	26.50	30.00
Sept.	40.00	27.00	26.50	31.107
Oct.	39.321	27.00	27.577	.....
Nov.	36.00	27.00	29.00	.....
Dec.	36.00	27.00	29.00	.....
Aver.	41.975	30.162	26.251	.....



## Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	— 74,678
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Dec.	437,187	117,601	336,217	183,834	99,223	+ 34,737
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Jan.	435,635	107,231	335,944	178,326	119,517	+ 28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+ 18,985
Mar.	429,410	104,551	338,451	164,623	106,170	+ 30,884
Apr.	429,708	98,638	335,921	164,410	117,041	+ 28,015
May	434,852	92,943	336,697	170,476	115,355	+ 20,622
June	426,905	82,919	340,743	153,042	110,527	+ 16,039
July	432,918	85,728	341,684	144,410	110,323	+ 32,552
Aug.	429,627	82,768	344,315	144,375	110,323	+ 23,826
Sept.	425,168	80,436	344,530	144,538	106,927	+ 16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+ 20,615
Nov.	428,520	68,249	345,832	128,719	98,725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	70,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	.....	.....	.....	.....	1,165,364	.....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	449,441	130,785	334,904	211,547	133,259	+ 33,775
Apr.	463,582	125,250	337,282	204,618	120,680	+ 46,932
May	474,657	133,694	338,835	210,424	124,060	+ 59,092
June	492,072	111,229	343,585	191,875	133,702	+ 67,841
July	518,699	110,367	357,474	193,338	81,500	+ 68,254
Aug.	487,259	97,786	359,049	191,476	120,563	+ 34,520

## Scrap Copper Receipts by Custom Smelters and Refineries in United States\*

(In Short Tons)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511
Feb.	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	14,712
Mar.	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	19,522
Apr.	12,304	8,555	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525
May	8,749	8,458	8,033	10,857	5,687	15,133	20,805	12,397	13,989	13,960
June	20,523	8,628	4,425	10,945	13,309	14,765	14,768	11,949	13,945	15,065
July	10,040	6,642	5,188	9,663	10,260	9,988	12,632	8,926	12,185	11,201
Aug.	10,452	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	7,476
Sept.	4,903	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	10,070
Oct.	9,459	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	.....
Nov.	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	.....
Dec.	7,178	4,638	6,208	11,476	14,876	13,180	14,613	11,237	10,796	.....
Total	142,067	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	.....

\* As compiled by Copper Institute.

## Brass and Bronze Ingot Monthly Shipments (NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	19,456	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046
Feb.	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746
Mar.	14,552	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948	18,825	26,109
Apr.	10,695	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115
May	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437	22,037	17,191	23,967
June	9,986	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	22,922
July	10,220	21,609	32,016	19,947	19,321	17,074	18,513	17,364	16,695	16,658	20,346
Aug.	14,194	29,689	25,285	21,507	20,156	21,894	27,013	23,812	19,654	17,882	21,741
Sept.	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,870	20,540	22,685
Oct.	18,026	32,240	33,124	25,811	22,280	20,080	25,228	23,045	22,800	23,225	.....
Nov.	18,488	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	.....
Dec.	17,950	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	.....
Total	175,643	303,543	332,378	277,736	271,251	263,253	298,406	274,096	248,297	227,607	.....
Aver.	14,437	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,691	18,133	.....

## Mine Production of Copper in United States

(U. S. Bureau of Mines)

	Eastern	Missouri	Western	Total
1956				
Ttl.	79,681	2,130	1,018,496	1,100,307
1957				
Dec.	6,962	67	81,080	88,109
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Feb.	6,826	125	74,766	81,717
Mar.	7,517	123	79,594	87,234
April	7,035	161	76,911	84,107
May	6,522	152	71,717	78,391
June	5,801	155	62,296	68,252
July	4,188	132	56,672	61,222
Aug.	5,570	127	61,342	67,039
Sept.	5,312	114	77,561	82,987
Oct.	7,002	60	85,075	91,518
Nov.	6,617	60	87,379	94,056
Dec.	6,614	70	88,070	94,514
Ttl.	76,849	1,250	902,021	980,404
1959				
Jan.	6,590	126	90,386	97,102
Feb.	5,883	130	81,889	87,902
Mar.	6,513	140	91,499	98,152
Apr.	7,240	150	93,295	100,685
May	7,007	110	94,277	101,394
June	7,245	124	86,861	94,230
July	6,763	111	79,927	86,801

## Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1958				
June	21.93	20.43	18.18	19.76
July	22.52	21.02	18.77	20.26
Aug.	22.62	21.12	18.87	20.12
Sept.	22.37	20.87	18.62	19.87
Oct.	24.80	23.30	21.05	22.30
Nov.	25.597	24.097	21.847	23.097
Dec.	24.356	22.856	20.606	21.856
Aver.	21.788	20.282	18.035	18.047
1959				
Jan.	25.29	23.79	21.54	22.79
Feb.	26.42	24.92	22.67	24.11
Mar.	28.79	27.29	25.04	26.79
Apr.	28.04	26.50	24.29	26.04
May	27.81	26.31	24.06	25.81
June	26.80	25.30	23.05	24.80
July	25.14	23.64	21.39	23.14
Aug.	25.762	24.762	22.012	23.762
Sept.	26.369	24.869	22.319	24.369

\*Of dry content for material having a dry copper content in excess of 80%.

## Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1958				
July	22.52	21.02	19.24	13.53
Aug.	22.62	21.12	19.11	13.80
Sept.	22.37	20.87	18.88	12.90
Oct.	24.80	23.30	20.51	14.938
Nov.	25.597	24.097	20.182	14.125
Dec.	24.356	22.856	19.038	13.038
Aver.	21.777	20.277	18.653	13.024
1959				
Jan.	25.29	23.79	19.70	13.982
Feb.	26.42	24.92	21.08	15.08
Mar.	28.79	27.29	22.85	16.85
Apr.	28.04	26.54	21.69	15.70
May	27.81	26.31	21.17	15.17
June	26.80	25.30	21.159	15.307
July	25.14	23.64	20.13	14.47
Aug.	25.762	24.762	21.286	14.81
Sept.	26.369	24.869	22.304	16.50

METALS, OCTOBER, 1959

# Lead Statistics Reported by American Bureau of Metal Statistics

## Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

### Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
	Antimonial	Lead		Antimonial	Lead		Antimonial	Lead	Total
	Pig	Content	Total	Pig	Content	Total	Pig	Content	
1958									
Nov. ..	120,951	8,971	129,922	112,495	9,381	121,876	273,033	18,918	291,951
Dec. ..	129,461	10,898	140,359	90,498	8,583	99,081	313,232	21,233	334,465
Total ..	1,485,262	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Jan. ..	129,604	9,755	139,359	114,038	10,014	124,052	328,719	20,974	349,693
Feb. ..	114,528	8,944	123,472	90,915	9,094	100,009	347,455	20,824	368,279
Mar. ..	123,549	8,747	132,296	118,050	9,403	127,453	362,493	20,168	382,661
Apr. ..	127,995	10,398	138,393	146,409	10,345	156,754	334,178	20,221	354,399
May ..	130,046	10,216	140,262	144,988	8,566	153,554	310,042	21,871	331,913
June ..	130,142	10,960	141,102	146,505	12,894	159,399	285,489	19,938	305,427
July ..	113,394	8,721	122,115	97,008	7,879	104,887	300,674	20,780	321,454
Aug. ..	105,433	7,094	112,527	114,715	11,517	126,232	290,832	16,357	307,189

### U. S. A.

1958									
Nov. ..	36,572	3,621	40,193	44,834	4,181	49,015	217,728	12,352	230,080
Dec. ..	39,504	4,307	43,811	31,869	3,737	35,606	239,049	13,417	252,466
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Jan. ..	40,110	3,365	43,475	48,311	4,492	52,803	244,870	12,426	257,296
Feb. ..	35,084	4,145	39,229	40,881	4,073	44,954	254,229	12,961	267,190
Mar. ..	35,140	3,868	39,008	49,742	4,279	54,021	248,166	12,744	260,910
Apr. ..	35,072	5,167	40,239	60,312	5,072	65,384	234,187	13,578	247,765
May ..	34,483	4,359	38,842	78,398	4,598	82,996	209,558	13,950	223,508
June ..	31,786	5,296	37,082	75,563	7,122	82,685	177,603	12,424	190,027
July ..	30,098	2,646	32,744	31,991	2,153	34,144	187,526	13,082	200,608
Aug. ..	23,404	2,091	25,495	55,094	7,397	62,491	174,959	7,979	182,938

### Outside U. S. A.

1958									
Nov. ..	84,379	5,350	89,729	67,661	5,200	72,861	55,305	6,566	61,871
Dec. ..	89,957	6,591	96,548	58,629	4,846	63,475	74,183	7,816	81,999
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	770,666	.....	.....	.....
1959									
Jan. ..	89,494	6,390	95,884	65,727	5,522	71,249	83,849	8,548	92,397
Feb. ..	79,444	4,799	84,243	50,034	5,021	55,055	93,226	7,863	101,089
Mar. ..	88,409	4,879	93,288	68,308	5,124	73,432	114,327	7,424	121,751
Apr. ..	92,923	5,231	98,154	86,097	5,273	91,370	99,991	6,643	106,634
May ..	95,563	5,857	101,420	66,590	3,968	70,558	100,484	7,921	108,405
June ..	98,356	5,644	104,000	70,942	5,772	76,714	107,886	7,514	115,400
July ..	83,296	6,075	89,371	65,017	5,726	70,743	113,148	7,698	120,846
Aug. ..	82,029	5,003	87,032	59,631	4,120	63,751	115,873	8,378	124,251

### Summary of Lead Statistics for United States

	Stocks (end of period)					Smelter Receipts			
	Recoverable Lead Content in Tons of 2,000 Pounds	Raw Material at Smelter	Base Bullion At Smelter & Transit	At Refinery and Process	Refined Pig and Antimonial	Total	Primary U.S.A.	Outside U.S.A.	Scrap Total
1958									
September ..	70,290	4,948	32,606	227,380	335,224	21,775	14,937	1,673	38,385
October ..	58,863	4,773	29,833	220,063	313,532	19,630	9,205	3,699	32,534
November ..	60,222	3,573	30,208	230,080	324,083	23,603	15,932	3,869	43,404
December ..	68,197	4,489	28,955	252,466	354,107	25,544	18,921	4,090	43,555
Total ..	.....	.....	.....	.....	.....	297,687	191,415	29,080	518,182
1959									
January ..	69,015	4,243	31,577	257,296	362,131	24,931	19,185	3,167	47,283
February ..	58,921	2,919	35,062	267,190	364,092	22,934	8,435	1,772	33,141
March ..	65,478	4,283	33,815	260,910	364,486	22,258	21,368	1,426	45,052
April ..	61,779	4,424	31,596	247,765	345,564	22,868	11,344	1,214	35,426
May ..	52,115	3,370	32,693	223,508	311,686	22,072	5,330	2,008	29,410
June ..	55,472	7,454	27,020	190,027	279,973	24,610	12,690	2,444	39,744
July ..	51,091	7,009	31,461	200,608	290,169	20,029	11,799	2,065	33,893
August ..	49,262	9,637	24,994	182,838	266,831	20,958	2,703	1,428	25,089
1958									
September ..	42,473	38,508	4,525	43,033	65,301	4,516	69,817		
October ..	41,975	40,225	5,153	45,378	70,580	4,455	75,035		
November ..	41,365	36,572	3,621	40,193	44,834	4,181	49,015		
December ..	39,972	39,504	4,307	43,811	31,869	3,737	35,606		
Total ..	512,323	473,208	46,985	520,193	589,528	49,893	639,421		
1959									
January ..	45,938	40,110	3,365	43,475	48,311	4,492	52,803		
February ..	40,655	35,084	4,145	39,229	40,881	4,073	44,954		
March ..	38,138	35,140	3,868	39,008	49,742	4,279	54,021		
April ..	38,614	35,072	5,167	40,239	60,312	5,072	65,384		
May ..	38,722	34,483	4,359	38,842	78,398	4,598	82,996		
June ..	35,807	31,786	5,296	37,082	75,563	7,122	82,685		
July ..	37,328	30,098	2,646	32,744	31,991	2,153	34,144		
August ..	26,698	23,404	2,091	25,495	55,094	7,397	62,491		

# United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)  
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1964	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
Total		613,293	644,382		529,484
1957					
Total		604,353	645,534		463,060
1958					
January	91,598	47,665	139,263	101,206	33,422
February	101,206	47,133	148,339	119,522	23,832
March	119,522	43,441	162,963	128,754	28,885
April	128,754	40,984	169,738	143,136	22,172
May	143,136	47,487	190,623	155,121	30,021
June	155,121	44,636	199,757	163,504	32,078
July	163,504	38,827	202,331	164,860	31,948
August	164,860	39,520	204,380	169,302	34,254
September	169,302	43,269	212,571	170,666	41,657
October	170,666	45,467	216,133	169,435	46,647
November	169,435	40,485	209,920	179,321	30,591
December	179,321	44,042	223,363	198,538	24,852
Total		522,956	614,554		380,359
1959					
January	198,508	43,652	242,160	208,874	33,035
February	208,874	39,498	248,372	214,946	30,685
March	214,946	39,238	254,184	210,524	40,980
April	210,524	40,606	251,130	197,823	52,469
May	197,823	39,101	236,924	171,577	65,207
June	171,577	37,459	209,036	133,235	75,465
July	133,235	32,882	166,117	142,694	22,380
August	142,694	25,589	168,283	124,259	43,850
September	124,259	14,801	139,060	117,296	21,795

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

# Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	Cable	Amm.	Foll	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1964								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Mar.	5,956	752		6,479	686	4,614	1,064	18,674
April	6,731	2,250		6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,260
Aug.	5,406	2,250	220	6,165	650	6,246	1,403	27,066
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367
Nov.	2,950	2,500	85	3,126	493	3,800	706	18,533
Dec.	2,499	1,350	36	2,820	270	2,607	529	13,997
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
Jan.	2,938	550	70	4,775	521	5,173	801	18,594
Feb.	2,899	1,750	70	5,124	90	1,643	888	11,368
Mar.	3,133	1,200	35	4,711	681	3,149	908	15,068
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450		4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959								
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,708	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355
May	4,054	2,900	35	6,870	475	7,990	2,843	40,040
June	5,272	3,210	70	12,515	180	8,009	3,663	42,546
July	850	295	70	2,570	315	3,166	997	14,117
August	3,268	1,150	205	3,073	410	6,640	1,921	27,183
September	1,003		35	3,401	255	2,296	1,484	13,321

# Lead Prices at New York

(Common Grade)

Monthly Average Prices  
(Cents per pound)

	1956	1957	1958	1959
Jan.	16.16	16.00	13.00	12.619
Feb.	16.00	16.00	13.00	11.583
Mar.	16.00	16.00	13.00	11.42
Apr.	16.00	16.00	12.00	11.20
May	16.00	15.385	11.712	11.905
June	16.00	14.32	11.24	12.00
July	16.00	14.00	11.00	12.00
Aug.	16.00	14.00	10.85	12.286
Sept.	16.00	14.00	10.89	13.00
Oct.	16.00	13.704	12.673	....
Nov.	16.00	13.50	13.00	....
Dec.	16.00	13.00	13.00	....
Aver.	16.013	14.66	12.114	....

# Lead Sheet Prices

(To Jobbers, Full Sheets)  
Monthly Average Prices

(Cents per pound)

	1956	1957	1958	1959
Jan.	21.66	21.50	18.50	18.119
Feb.	21.50	21.50	18.50	17.083
Mar.	21.50	21.50	18.50	16.92
Apr.	21.50	21.50	17.50	16.70
May	21.50	20.885	17.212	17.405
June	21.50	19.82	16.74	17.50
July	21.50	19.82	16.50	17.50
Aug.	21.50	19.50	16.35	17.786
Sept.	21.50	19.50	16.39	18.50
Oct.	21.50	19.204	18.173	....
Nov.	21.50	19.00	18.50	....
Dec.	21.50	18.50	18.50	....

# Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1956	1957	1958	1959
Jan. . .	2,058	2,638	2,004	2,672
Feb. . .	1,340	1,961	1,803	1,791
Mar. . .	1,348	1,254	1,577	1,376
Apr. . .	1,368	1,178	1,242	1,439
May . .	1,761	1,605	1,454	1,593
June . .	1,807	1,878	1,773	2,116
July . .	2,178	2,469	2,101	2,556
Aug. . .	2,571	2,856	2,333	2,728
Sept. .	2,711	2,688	2,704	....
Oct. . .	3,015	3,042	2,976	....
Nov. . .	2,592	2,359	2,262	....
Dec. . .	2,265	2,015	3,036	....
Total	25,014	25,943	25,265	....

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# Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	—In base bullion (lead content)— At refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- monial lead	Total Stocks
1957							
July 1..	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1..	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1..	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1..	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1..	76,230	14,220	2,538	18,695	47,460	11,581	170,724
Dec. 1..	65,341	11,646	3,547	21,867	59,755	11,119	173,275
1958							
Jan. 1..	79,362	11,019	2,779	23,154	79,741	11,857	207,912
Feb. 1..	79,738	11,510	3,678	24,535	88,517	12,689	220,667
Mar. 1..	79,588	9,546	3,670	22,834	107,213	12,309	235,250
Apr. 1..	83,185	10,692	2,187	21,766	116,610	12,144	246,584
May 1..	86,053	11,838	2,138	20,524	130,668	12,468	263,689
June 1..	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1..	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865
June 1..	55,223	12,239	766	20,391	157,981	13,596	260,196
July 1..	58,451	13,270	943	19,468	120,914	12,321	225,367
Aug. 1..	53,115	18,379	158	18,021	129,551	13,143	232,367
Sept. 1..	50,007	17,389	.....	15,638	116,344	7,915	207,293

## Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	—Receipts of lead in ore—			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956					
Total	368,499	192,318	560,817	55,925	616,792
1957					
July	29,585	17,936	47,521	2,893	50,414
August	29,225	18,774	47,999	3,190	51,189
September	26,479	13,757	40,236	4,375	44,611
October	29,342	13,782	43,124	4,386	47,510
November	25,809	17,251	43,060	3,258	46,318
December	27,105	26,610	53,715	3,791	57,506
Total	356,409	206,901	563,310	42,537	605,847
1958					
January	25,537	22,097	47,634	3,507	51,141
February	23,789	16,400	40,189	2,184	42,373
March	21,735	20,038	41,773	3,154	44,927
April	25,104	15,821	40,925	1,913	42,838
May	27,427	10,228	37,655	1,867	39,522
June	28,577	13,811	42,388	1,366	43,754
July	22,289	19,692	41,891	1,615	43,506
August	22,984	13,043	36,027	1,252	37,279
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237
April	22,339	10,998	33,337	1,196	34,533
May	21,645	5,202	26,847	1,930	28,777
June	23,634	12,368	36,002	2,431	38,433
July	19,165	11,695	30,860	2,199	33,059
August	19,971	2,821	22,792	1,009	23,801

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably understate the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

METALS, OCTOBER, 1959

## N. Y. Lead Price Changes

(Effective Date)

1951		Apr. 1....13.75
Oct. 2..**19.00		Apr. 12....14.00
1952		June 2....14.25
Apr. 29....18.00		June 15....14.00
May 2....17.00		Aug. 25....14.25
May 12....15.00		Sept. 7....14.50
June 23....15.50		Sept. 15....14.75
June 24....16.00		Oct. 4....14.875
Oct. 7....15.00		Oct. 5....15.00
Oct. 14....14.00		1955
Oct. 22....13.50		Sept. 23....15.00-
Nov. 3....14.00		15.50
Nov. 10....14.20		Sept. 26....15.50
Nov. 11....14.50		Dec. 29....16.00
Nov. 20....14.25		1956
Nov. 24....14.00		Jan. 4....16.50
Dec. 22....14.25		Jan. 13....16.00
Dec. 29....14.50		1957
Dec. 31....14.75		May 9....15.50
1953		May 16....15.00
Jan. 7....14.50		June 11....14.00
Jan. 12....14.00		Oct. 14....13.50
Feb. 2....13.50		Dec. 2....13.00
Mar. 4....13.90		1958
Mar. 10....13.50		Apr. 1....12.00
Apr. 7....13.00		May 14....11.50
Apr. 16....12.50		June 3....11.00
Apr. 21....12.00		June 18....11.50
Apr. 29....12.50		July 1....11.00
May 18....12.75		Aug. 13....10.75
May 19....13.00		Sept. 17....11.00
May 26....13.15		Sept. 30....11.50
June 11....13.50		Oct. 2....12.00
July 20....13.75		Oct. 8....12.50
July 23....14.00		Oct. 14....13.00
Sept. 16....13.50		1959
1954		Jan. 21....12.00
Jan. 18....13.00		Feb. 11....11.50
Feb. 18....12.50		Feb. 24....11.00
Mar. 9....12.75		Mar. 5....11.50
Mar. 10....13.00		April 1....11.00
Mar. 26....13.25		April 20....11.50
Mar. 29....13.50		May 7....12.00
		Aug. 24....13.00

\*\*OPS Colling.

## Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

End of	(In tons of 2,000 pounds)	1956	1957	1958	1959
Jan. . . .	8,389	10,487	12,689	11,789	
Feb. . . .	9,095	10,220	12,309	12,111	
Mar. . . .	10,289	9,794	12,144	12,065	
Apr. . . .	10,690	9,391	12,468	13,355	
May . . . .	10,902	9,799	13,154	13,596	
June . . . .	9,452	9,503	12,856	12,321	
July . . . .	10,924	8,661	10,482	13,143	
Aug. . . .	10,074	9,553	10,889	7,915	
Sept. . . .	11,181	10,215	11,004	7,769	
Oct. . . .	11,382	11,581	12,050	....	
Nov. . . .	11,832	11,119	11,828	....	
Dec. . . .	11,746	11,857	12,595	....	

## Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

End of	(In tons of 2,000 pounds)			
	1956	1957	1958	1959
Jan. . .	5,045	5,113	3,743	3,541
Feb. . .	5,888	5,468	3,657	4,415
Mar. . .	5,526	5,091	3,527	4,098
Apr. . .	5,818	6,183	3,655	5,533
May . .	5,405	6,978	4,827	4,618
June . .	4,456	4,466	3,992	5,671
July . .	3,853	5,372	2,775	2,784
Aug. . .	5,343	7,967	5,244	2,185
Sept. . .	6,709	7,574	4,761	102
Oct. . .	5,378	6,148	5,849	....
Nov. . .	6,993	3,791	3,913	....
Dec. . .	5,766	3,290	4,539	....
Total	66,180	67,541	50,482	....

## Lead Imports and Exports By Principal Countries

(A.B.M.S.)  
Reported in pigs, bars, etc.; except where  
otherwise noted.

	1959		
	May	June	July
<b>IMPORTS</b>			
U. S.* (s.t.)	36,205	26,135	23,404
Canada (s.t.)	118	...	...
Belgium	2,606	...	...
Denmark	2,663	1,633	1,046
France	3,920	3,839	3,568
Germany, West**	4,333	5,432	...
Italy††	1,266	...	...
Netherlands	2,333	3,633	2,931
Norway	1,069	...	...
Sweden	1,240	1,365	...
Switzerland	1,660	1,468	1,191
U. K. (l.t.)	14,364	8,947	26,001
India† (l.t.)	2,280	1,406	...
<b>EXPORTS</b>			
U. S.* (s.t.)	74	28	193
Canada (s.t.)	12,230	15,610	3,478
Belgium	4,133	...	...
Denmark	920	382	682
France	444	1,109	684
Germany, West**	3,021	2,798	...
Netherlands	392	275	493
Sweden	910	1,798	...
Switzerland	27	...	...
Northern	...	...	...
Rhodesia† (l.t.)	714	1,070	1,902
Australia (l.t.)	15,882	5,982	9,653

\* Refined.

\*\* Includes scrap.

†† Includes lead alloys.

† British Bureau of Non-Ferrous Metal Statistics.

## French Lead Imports

(A.B.M.S.)

(In metric tons)

	1959		
	June	July	Aug.
Ore (gross weight)	9,399	12,531	8,118
Algeria	1,612	...	...
Morocco	6,787	11,356	7,107
Fr. Eq. Africa	1,000	1,225	1,000
Madagascar	...	...	11
Pig lead	3,839	3,568	3,853
Belgium	1,082	1,238	504
Germany (W.)	48	88	...
Netherlands	20	...	...
Spain	...	...	160
Algeria	4	26	14
Morocco	1,597	1,095	1,756
Tunisia	1,088	838	1,394
Australia	...	280	...
Other countries	...	3	25
Antimonial lead	38	285	47

## U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1959		
	June	July	Aug.
<b>(Gross Weight)</b>			
Lead and lead alloys	8,947	26,001	9,364
Australia	2,324	22,059	4,115
Canada	4,678	2,842	3,485
Peru	100	100	100
Other countries	1,845	1,000	1,664

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**DAILY METAL REPORTER**

## U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

	1959		
	Jan.-July		
	totals	June	July
<b>Metal Products</b>			
Ammunition	26,213	3,674	3,486
Bearing metals	13,229	1,922	1,764
Brass and bronze	14,292	2,068	1,769
Cable covering	36,677	5,791	3,183
Calking lead	45,939	8,076	6,349
Casting metals	4,407	540	525
Collapsible tubes	5,023	919	453
Foil	2,177	375	284
Pipes, traps, and bends	13,436	2,125	1,868
Sheet lead	16,619	2,511	2,185
Solder	39,909	6,075	6,888
Storage battery grids, posts, etc.	102,075	15,425	16,167
Storage battery oxides	100,646	15,567	14,107
Terne metal	1,181	202	143
Type metal	15,619	2,300	2,010
<b>Total</b>	<b>437,442</b>	<b>67,570</b>	<b>61,181</b>
<b>Pigments:</b>			
White lead	8,026	1,483	1,227
Red lead and litharge	46,777	7,145	6,376
Pigment colors	7,601	1,243	765
Other*	2,553	394	351
<b>Total</b>	<b>64,957</b>	<b>10,265</b>	<b>8,719</b>
<b>Chemicals:</b>			
Tetraethyl lead	94,926	13,079	15,281
Miscellaneous chemicals	1,921	226	366
<b>Total</b>	<b>96,847</b>	<b>13,305</b>	<b>15,647</b>
<b>Miscellaneous uses:</b>			
Annealing	2,899	493	121
Galvanizing	713	153	33
Lead plating	120	8	17
Weights and ballast	3,927	580	494
<b>Total</b>	<b>7,659</b>	<b>1,234</b>	<b>665</b>
<b>Other uses unclassified</b>	<b>9,584</b>	<b>1,429</b>	<b>1,354</b>
<b>Total reported†</b>	<b>616,489</b>	<b>93,803</b>	<b>87,566</b>
Estimated unreported consumption	14,000	2,000	2,000
<b>Grand total†</b>	<b>630,500</b>	<b>95,800</b>	<b>89,600</b>
<b>Daily average‡</b>	<b>2,974</b>	<b>3,173</b>	<b>2,890</b>

\* Includes lead content of leaded zinc oxide production.

† Includes lead content of scrap used directly in fabricated products.

‡ Based on number of days in month without adjustment for Sundays and holidays.

## Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks June 30, 1959	Net Receipts In July	Consumed In July	Stocks July 31, 1959
Soft lead	108,460	57,696	57,388	108,768
Antimonial lead	37,809	20,924	20,876	37,857
Lead in alloys	6,598	5,009	4,473	7,134
Lead in copper-base scrap	1,023	1,450	1,361	1,112
<b>Total</b>	<b>153,890</b>	<b>85,079</b>	<b>*84,098</b>	<b>154,871</b>

\* Excludes 3,146 tons of lead which went directly from scrap to fabricated products and 322 tons of lead contained in leaded zinc oxide production.

## Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

	JULY				
	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	32,033	20,272	4,463	1,361	58,129
Pigments	8,372	25	...	...	8,397
Chemicals	15,646	1	...	...	15,647
Miscellaneous	239	426	...	...	665
Unclassified	1,098	152	10	...	1,260
<b>Total</b>	<b>57,388</b>	<b>20,876</b>	<b>4,473</b>	<b>1,361</b>	<b>*84,098</b>

\* Excludes 3,146 tons of lead which went directly from scrap to fabricated products and 322 tons of lead contained in leaded zinc oxide production.

## U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1957	1958	1959
Jan.	29,657	29,607	28,872
Feb.	29,219	27,855	25,968
Mar.	29,144	29,713	26,691
Apr.	27,246	26,230	29,252
May	31,574	28,839	27,280
June	28,607	28,624	30,099
July	27,604	27,201	26,851
Aug.	24,756	21,726	25,358
Sept.	29,519	28,829	...
Oct.	32,486	31,356	...
Nov.	31,060	28,786	...
Dec.	26,530	27,154	...
<b>Total</b>	<b>347,699</b>	<b>335,920</b>	...

## American Antimony

Monthly Average Prices

In bulk, f.o.b. Laredo  
(Cents per lb. in ton lots)

	1956	1957	1958	1959
Jan.	33.00	33.00	33.00	29.00
Feb.	33.00	33.00	30.818	29.00
Mar.	33.00	33.00	29.00	29.00
Apr.	33.00	33.00	29.00	29.00
May	33.00	33.00	29.00	29.00
June	33.00	33.00	29.00	29.00
July	33.00	33.00	29.00	29.00
Aug.	33.00	33.00	29.00	29.00
Sept.	33.00	33.00	29.00	...
Oct.	33.00	33.00	29.00	...
Nov.	33.00	33.00	29.00	...
Dec.	33.00	33.00	29.00	...
<b>Aver.</b>	<b>33.00</b>	<b>33.00</b>	<b>29.485</b>	...



## Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included. (Tons of 2,000 lbs.)

	Stock Begin- ning	Pro- duction	Shipments				Stock at End	Daily Avg. Prod.
			Domestic	Export & Drawback	Gov't Acct	Total		
1950 Total	94,221	910,354	849,246	18,189	128,256	995,691	5,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,584	931,833	836,800	42,067	39,949	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568		
1952 Total	21,901	961,430	803,343	66,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,525	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	66,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		86,918	83,968	1,625	7,267	92,860		
1956 Total		1,062,954	869,270	9,027	157,014	1,035,311	68,622	2,904
1956 Mo. Avg.		88,580	72,439	752	13,085	86,275		
1957								
July	133,455	85,779	57,862	4,497	11,186	73,055	146,179	2,767
August	146,179	84,166	70,318	860	9,871	81,049	149,296	2,715
September	149,296	77,455	62,111	530	10,344	72,985	153,766	2,582
October	153,766	81,492	66,225	372	12,736	79,333	155,925	2,629
November	155,925	79,764	73,437	581	9,148	83,166	152,531	2,658
December	152,531	86,270	72,439	210	9,188	72,128	166,655	2,783
1957 Total		1,067,450	765,132	15,460	179,466	815,667		
1958								
January	166,655	82,343	58,211	641	9,805	68,657	180,346	2,656
February	180,346	68,354	49,072	446	9,993	59,511	189,189	2,441
March	189,189	72,274	48,948	111	8,763	57,822	203,641	2,331
April	203,641	70,214	46,598	159	5,927	52,684	221,171	2,340
May	221,171	71,018	51,390	129		51,619	240,670	2,291
June	240,670	66,967	54,487	171		54,658	252,979	2,232
July	252,979	65,119	60,312	55		60,187	257,911	2,101
August	257,911	62,927	68,718	591		69,309	251,529	2,030
September	251,529	63,705	76,905	213		77,118	238,116	2,124
October	238,116	65,304	93,018	226		93,224	210,176	2,107
November	210,176	65,174	83,394	212		83,606	191,744	2,172
December	191,744	75,503	76,862	148		77,010	190,237	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325		
1959								
January	190,237	76,481	70,770	171		70,941	195,777	2,467
February	195,777	71,174	65,641	849		66,490	200,461	2,542
March	200,461	79,918	73,814	482		74,296	206,083	2,578
April	206,083	76,393	78,358	255		78,613	203,863	2,546
May	203,863	77,489	85,073	275		85,348	196,004	2,500
June	196,004	76,544	99,858*	204	2,199	102,162	169,886	2,518
July	169,886	73,101	59,460	94	900	60,454	182,033	2,358
August	182,033	69,768	58,918	864		59,782	192,019	2,251
September	129,019	62,202	60,781	404		61,185	193,036	2,073

\* Inflated by abnormal shipments on consignment of approximately 9,000 tons.

## U. S. Consumption of Slab Zinc

Bureau of Mines  
By Industries (Short Tons)

	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,788	887,009
1952 Total	375,563	236,022	155,811	51,508	30,855	849,289
1953 Total	403,162	306,846	177,301	53,784	35,037	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957						
June	29,907	27,688	8,710	3,613	2,646	73,464
July	26,067	26,116	6,361	2,698	2,981	65,123
August	27,885	29,237	9,755	3,686	3,099	74,562
September	28,651	31,051	9,588	2,911	1,590	75,976
October	32,940	35,499	10,952	3,385	1,783	87,898
November	28,025	31,396	10,024	2,843	1,255	76,595
December	24,383	27,927	7,854	2,679	1,427	67,421
Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
January	26,861	26,348	9,115	3,183	1,664	69,295
February	24,598	22,629	7,279	2,716	1,316	60,347
March	27,171	19,045	6,871	3,138	1,724	59,978
April	27,464	17,829	6,392	3,259	1,295	58,432
May	30,935	18,316	6,597	2,896	2,263	61,907
June	34,377	21,497	6,643	2,961	2,212	67,690
July	30,677	17,387	6,275	2,848	1,920	60,007
August	34,663	20,382	8,358	3,379	1,901	70,033
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,191
November	31,658	27,311	10,067	3,276	826	74,302
December	31,746	29,926	10,529	3,681	1,018	78,082
Total	370,441	273,540	92,906	38,690	16,772	737,942
1959						
January	31,729	29,110	11,172	3,874	2,521	79,506
February	31,672	26,448	11,508	3,418	2,864	77,010
March	37,287	29,286	12,889	3,629	3,203	87,394
April	38,541	31,262	12,304	3,715	3,223	90,145
May	38,788	29,169	12,015	3,316	3,305	88,093
June	40,531	36,269	10,764	3,801	3,120	95,985
July	23,700	28,120	7,558	2,509	2,042	65,429

METALS, OCTOBER, 1959

## Prime Western Zinc Prices (East St. Louis, f.o.b.)

	(Cents per pound) (In tons of 2,240 pounds)			
	1956	1957	1958	1959
Jan.	13.46	13.50	10.00	11.50
Feb.	13.50	13.50	10.00	11.411
Mar.	13.50	13.50	10.00	11.00
Apr.	13.50	13.50	10.00	11.00
May	13.50	11.933	10.00	11.00
June	13.50	10.84	10.00	11.00
July	13.50	10.00	10.00	11.00
Aug.	13.50	10.00	10.00	11.00
Sept.	13.50	10.00	10.00	11.381
Oct.	13.50	10.00	10.865	....
Nov.	13.50	10.00	11.386	....
Dec.	13.50	10.00	11.50	....
Aver.	13.497	11.40	10.313	....

## High Grade Zinc Prices

	(Delivered) N. Y. Monthly Averages (Cents per pound)			
	1956	1957	1958	1959
Jan.	14.81	14.85	11.35	12.50
Feb.	14.85	14.85	11.35	12.411
Mar.	14.85	14.85	11.35	12.00
Apr.	14.85	14.85	11.084	12.00
May	14.85	13.283	11.00	12.00
June	14.85	12.19	11.00	12.00
July	14.85	11.35	11.00	12.00
Aug.	14.85	11.35	11.00	12.006
Sept.	14.85	11.35	11.00	12.625
Oct.	14.85	11.35	11.865	....
Nov.	14.85	11.35	12.386	....
Dec.	14.85	11.35	12.50	....
Aver.	14.847	12.75	11.407	....

## U. K. Zinc Consumption

	(British Bureau of Non-Ferrous Metal Statistics) (In Tons of 2,240 Pounds)		
	1957	1958	1959
Jan. ....	28,485	27,473	27,849
Feb. ....	26,276	24,551	25,676
Mar. ....	27,049	26,967	27,243
Apr. ....	24,247	24,984	28,006
May ....	29,589	24,579	26,167
June ....	25,202	25,587	30,221
July ....	25,934	23,794	26,318
Aug. ....	20,381	19,076	21,566
Sept. ....	27,792	26,747	....
Oct. ....	29,552	29,838	....
Nov. ....	26,705	26,432	....
Dec. ....	24,419	26,042	....
Total	315,631	306,070	....

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## Mine Production of Zinc in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1954 Total	166,487	63,100	234,942	464,539
1955 Total	163,230	73,630	277,811	514,671
1956 Total	175,310	61,080	301,253	537,643
1957 Total	196,877	29,506	290,151	520,128
1958				
Feb.	13,652	1,365	18,528	33,545
Mar.	13,922	1,291	20,411	35,624
Apr.	15,719	1,311	22,375	39,405
May	15,580	1,314	18,940	35,834
June	14,931	1,490	16,650	32,971
July	13,427	—	15,985	29,442
Aug.	15,760	—	13,627	29,387
Sept.	14,857	—	15,279	29,865
Oct.	16,197	—	16,074	32,271
Nov.	15,393	—	16,998	32,391
Dec.	15,064	—	16,939	32,003
1959 Total	181,202	8,450	213,267	402,919
1959				
Jan.	16,319	—	19,117	35,436
Feb.	16,405	—	19,304	35,709
Mar.	17,602	—	18,822	36,424
Apr.	18,521	—	19,149	37,670
May	18,500	—	19,170	37,670
June	17,501	—	18,443	35,944
July	12,697	—	16,686	31,383
Aug.	13,810	—	17,055	31,005

\*Includes Alaskan output in some months.

## Mine Production of Lead in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1953 Ttl.	9,970	136,650	188,776	335,412
1954 Ttl.	8,608	138,940	169,804	317,352
1955 Ttl.	10,379	145,640	177,409	333,409
1956 Ttl.	11,395	141,900	195,034	348,329
1957 Ttl.	9,300	135,800	188,392	333,493
1958				
Mar.	526	4,633	13,148	18,307
Apr.	487	12,438	12,739	25,664
May	626	11,660	11,939	24,225
June	615	10,662	11,499	22,776
July	454	10,019	10,662	21,135
Aug.	447	8,859	9,512	18,818
Sept.	389	7,734	11,221	19,344
Oct.	517	9,290	11,467	21,274
Nov.	606	10,500	11,823	22,929
Dec.	565	9,600	11,699	21,865
1959 Ttl.	6,816	119,070	140,033	265,920
1959				
Jan.	469	9,748	13,180	23,397
Feb.	501	8,457	12,392	21,578
Mar.	601	7,943	12,585	21,129
Apr.	454	8,103	12,635	21,192
May	413	7,253	12,427	20,093
June	458	8,185	12,727	21,370
July	369	8,190	10,980	19,539
Aug.	353	9,762	11,579	21,694

## Mine Production of Gold in United States

(U. S. Bureau of Mines)

	Eastern States	Western States	Alaska*	Total
1955 Ttl.	2,026	1,634,625	247,535	1,884,186
1956 Ttl.	1,998	1,607,930	204,300	1,814,228
1957 Ttl.	2,174	1,556,450	210,000	1,768,624
1958				
Mar.	174	123,808	96	124,078
Apr.	192	124,705	906	125,615
May	203	124,490	557	125,220
June	182	122,277	8,454	130,943
July	38	116,775	29,735	146,528
Aug.	174	113,281	34,947	148,202
Sept.	156	128,613	38,960	167,459
Oct.	186	135,882	42,467	178,535
Nov.	—	—	—	—
Dec.	—	—	10,373	144,757
1959				
Jan.	—	—	1,003	145,077
Feb.	—	—	233	128,614
Mar.	—	—	106	135,192
Apr.	—	—	106	136,283
June	—	—	8,882	146,815
July	—	—	26,457	160,859
Aug.	—	—	33,113	138,329

\*Alaska totals based on mint and smelter receipts.

## U. S. Silver Production\* (A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1954 Total	38,069	39,422	77,491
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957 Total	36,279	34,932	71,211
1958			
February	3,589	2,790	6,379
March	2,465	3,568	6,033
April	3,123	3,056	6,179
May	2,597	2,660	5,257
June	3,243	3,210	6,453
July	2,127	2,494	4,621
August	2,651	3,235	5,886
September	2,614	3,165	5,779
October	3,831	2,750	6,581
November	2,505	3,283	5,788
December	3,275	3,652	6,927
Total	35,540	37,414	72,954
1959			
January	2,330	4,460	6,790
February	2,827	2,913	5,740
March	2,823	4,087	6,910
April	2,946	3,233	6,179
May	2,641	3,484	6,125
June	3,219	3,231	6,450
July	2,609	3,284	5,893
August	1,472	1,229	2,701

\* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

## Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

	(In Fine Ounces)			
	Eastern States	Missouri	Western States	Alaska*
1957 Total	610,386	240,000	37,018,950	26,000
1958				
June	3,637	21,300	2,775,606	3,154
July	7,723	21,840	2,503,013	4,584
August	8,819	19,970	2,836,937	5,968
September	5,783	17,180	2,621,537	3,392
October	5,653	20,600	2,749,976	5,338
November	†	16,000	†	3,175
December	†	13,730	†	675
Total	†	210,000	†	28,000
1959				
January	†	21,000	†	132
February	†	18,060	†	154
March	†	17,200	†	10
April	†	17,600	†	15
May	†	15,900	†	68
June	†	8,900	†	2,767
July	†	10,600	†	3,940
August	†	17,900	†	927
September	†	8,900	†	2,767
October	†	10,600	†	3,940

† Figures not available.

\* Alaska totals based on mint and smelter receipts.

## Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

	(In short tons)					
	1952	1953	1954	1955	1956	1957
Jan.	76,934	89,895	116,247	128,203	140,394	147,029
Feb.	72,374	92,649	110,483	116,236	132,763	119,059
Mar.	77,069	104,460	122,339	130,272	145,895	135,706
Apr.	76,880	102,071	120,434	126,394	144,726	139,152
May	80,803	105,464	125,138	131,128	150,800	145,174
June	77,476	104,152	120,758	127,634	145,726	138,007
July	78,368	109,285	126,161	132,669	151,624	142,157
Aug.	85,175	110,545	125,296	133,551	152,406	143,449
Sept.	76,882	108,333	120,332	130,606	132,316	129,278
Oct.	77,312	108,219	125,089	134,655	149,125	133,759
Nov.	74,639	105,636	121,252	133,689	145,081	135,024
Dec.	83,419	110,291	127,056	140,748	148,391	140,033
Ttl.	937,330	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710

## Average Silver Prices

	(Cents per fine ounce)		
	1956	1957	1958
Jan.	90.357	91.375	89.449
Feb.	90.90	91.375	88.625
Mar.	91.128	91.375	88.625
Apr.	90.875	91.375	88.625
May	90.75	91.307	88.625
June	90.46	90.456	88.625
July	90.14	90.31	88.625
Aug.	90.614	90.909	88.625
Sept.	90.75	90.602	88.673
Oct.	90.722	90.625	89.966
Nov.	91.375	90.382	90.125
Dec.	91.375	89.80	89.932
Aver.	90.79	90.824	89.043

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

METALS, OCTOBER, 1959.

## U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Ore, conc.			
matte & other unref. (cont.)	37	20	...
Refined ingots,			
bars, etc.†	12,607	11,378	16,605
Canada	477	15	3
Argentina	156	...	772
Brazil	604	235	355
Austria	...	...	20
Denmark	129	112	336
France	2,189	2,780	4,175
Germany (W.)	3,038	4,770	3,555
Italy	1,494	1,067	2,851
Netherlands	1,120	112	1,229
Norway	308	...	...
Sweden	128	112	145
Switzerland	56	27	45
United Kingdom	1,469	1,713	1,855
Yugoslavia	560	...	...
Formosa	...	...	10
India	...	...	592
Japan	777	338	322
Australia	101	...	336
Other countries	1	97	4
<b>Total Exports:</b>			
Crude & refined	12,644	11,398	16,605
Pipes and tubes	39	84	37
Plates and sheets	28	12	17
Semifabricated forms	251	276	444
Wire, bare	493	502	211
Building wire and cable†	119	164	145
Weatherproof wire†	26	5	5
Insulated copper wire n.e.s.†	894	1,139	4,252

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

‡ Gross weight; n.e.s.—not elsewhere specified.

## U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Zinc Ore			
(content)	45,768	47,432	34,644
Canada	11,003	17,256	11,497
Mexico	17,294	21,044	18,149
Cuba	...	...	5
Guatemala	...	...	80
Honduras	362	...	182
Bolivia	...	674	...
Colombia	...	...	10
Peru	11,105	7,193	4,520
U. of S. Africa	715	377	...
Australia	5,202	687	222
Philippines	3	1	1
Other countries	84	200	1
Zinc blocks,			
pigs, etc.	17,744	17,139	9,116
Canada	9,494	9,756	5,980
Mexico	1,211	1,179	...
Peru	1,493	1,894	533
Belgium	2,451	190	45
Italy	771	441	110
Yugoslavia	882	253	248
Belgian Congo	882	185	1,640
Rhodesia & Nyasaland	560	...	560
Australia	...	3,241	...
<b>Total Imports:</b>			
Zinc ore, blocks, pigs	63,512	64,571	43,760
Dross and skim.	11	134	166
Old and worn out	...	12	36

METALS, OCTOBER, 1959

## U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Ore, matte, etc.			
(content)	12,257	11,891	5,952
Canada	2,127	3,249	2,400
Mexico	32	122	50
Guatemala	...	146	...
Honduras	225	361	222
Bolivia	...	604	993
Colombia	...	...	212
Peru	5,205	2,070	1,334
U. of S. Africa	3,652	3,090	...
Australia	1,010	2,177	548
Philippines	6	36	29
Other countries	...	36	164
Base bullion			
(content)	...	2	48
Peru	...	...	45
Other countries	...	2	3
Pigs and bars	26,135	23,404	19,074
Canada	9,657	3,104	2,882
Mexico	5,569	6,715	7,000
Peru	4,554	2,051	2,849
France	...	83	...
Spain	952	...	...
United Kingdom	...	313	112
Yugoslavia	546	4,179	3,637
Australia	4,731	6,959	2,567
Other countries	126	...	27
<b>Total Imports:</b>			
Ore, base bullion, refined	38,392	35,297	25,074
Lead scrap, dross, etc. (cont.)	1,253	420	296
Antimonial lead & typemetal	690	2	100
Lead content thereof	635	2	77

## U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Slabs, blocks, etc	151	146	214
Canada	4	...	...
Mexico	...	...	110
Brazil	48	...	...
Chile	15	...	...
United Kingdom	84	140	84
Taiwan	...	...	10
Other countries	...	6	10
<b>Total Exports:</b>			
Ore, conc., slabs, blocks	151	146	214
Scrap, ashes, dross and skimmings	561	850	2,135
Battery shells and parts, un-assembled	28	60	...
Rolled in sheets, plates and strips and die castings	259	205	337
Zinc & zinc alloys in crude and semifabricated forms	19	69	95
Zinc Oxide	314	206	258

## Comparative Metal Prices

	Av.	OPA	1959
Copper, domestic	1939	1946	Oct. 21
Electro., Del. Val.	11.20	14.375	30.00-31.50*
Lead (N. Y.)	5.06	8.25	13.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	12.50-13.00
New York, del.	...	...	13.00-13.50
Tin Spot Straits, N. Y.	...	...	101.75
Aluminum ingot 99 1/2%+	20.00	15.00	26.80
Antimony (K.M.M. brand f.o.b. Laredo)	12.36	14.50	29.00

\* Producers' prices.

## U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Ore, matte & regulus (cont.)	12,112	5,331	6,301
Canada	921	1,908	365
Mexico	163	188	185
Cuba	1,175	...	1,210
Argentina	...	15	...
Bolivia	317	268	38
Chile	520	1,575	...
Peru	332	579	301
Cyprus	1,786	...	...
Philippines	2,739	...	1,582
U. of S. Africa	4,159	798	...
Australia	...	...	2,598
Other countries	...	...	2
Blister copper (content)	27,757	27,860	18,837
Mexico	3,299	3,283	2,529
Chile	17,532	16,632	15,214
Peru	...	610	...
Rhodesia & Nyasaland	5,259	6,773	...
U. of S. Africa	1,667	556	...
Turkey	...	...	1,094
Other countries	...	6	...
Refined cathodes and shapes	19,320	10,742	12,935
Canada	9,562	4,112	7,131
Mexico	1,595	330	499
Chile	2,000	939	1,823
Peru	1,503	1,998	1,700
Belgium	56	1,250	...
Germany (W.)	1,792	...	...
Sweden	104	...	...
United Kingdom	559	...	2
Belgian Congo	940	1,200	1,500
Rhodesia & Nyasaland	1,148	913	280
U. of S. Africa	61	...	...
<b>Total Imports:</b>			
Crude & refined	59,189	43,933	38,073
Old and scrap (content)	793	523	242
Composition metal (content)	...	2	...
Brass scrap and old (cu. cont.)	351	95	134

## U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	June	July	Aug.
Copper scrap, unalloyed* (new and old)	200	219	283
Canada	33	118	...
Argentina	...	...	22
Germany (W.)	44	20	172
Hungary	27	...	...
Netherlands	...	...	28
India	...	...	56
Japan	68	53	...
Other countries	28	28	5
Copper-base scrap, alloyed† (new and old)	3,212	2,092	1,823
Canada	3	31	3
Mexico	3	...	...
France	...	...	20
Germany (W.)	311	170	346
Italy	...	...	26
Netherlands	78	16	17
India	78	102	80
Japan	2,600	1,709	1,185
Hong Kong	139	61	145
Other countries	...	3	1

\* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

June July Aug.



## World Production of Copper

(American Bureau of Metal Statistics)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugoslavia	India	Japan	Turkey	Australia	Northern Rhodesia	Union of South Africa
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(i)	(j-k)	(l)	(m)	(n)	(o)	(p)
1955	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
Total 1955	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1956	1,115,483	360,745	42,905	.....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1957	90,336	34,190	5,954	40,205	8,497	25,161	1,589	9,559	6,023	821	10,195	2,580	5,555	44,847	4,731
Mar.	86,123	32,635	6,101	16,115	4,010	23,286	1,463	9,884	3,149	788	8,515	2,942	6,220	41,396	4,413
April	80,828	32,471	6,141	23,264	3,481	24,543	1,636	7,095	2,967	786	8,806	2,574	6,229	41,615	4,488
May	71,092	32,418	5,954	34,811	3,405	23,128	1,674	7,414	3,102	769	10,617	1,810	6,819	44,447	4,018
June	64,444	31,131	5,995	40,495	3,780	24,418	1,610	9,091	3,245	801	10,762	1,136	6,139	44,010	3,324
July	67,917	50,867	6,340	45,211	3,646	26,409	1,855	3,451	2,838	786	11,063	.....	6,220	42,000	4,974
Aug.	70,541	27,546	6,294	40,913	3,537	24,649	1,749	12,027	2,870	792	12,583	.....	.....	17,291	4,726
Sept.	92,214	22,572	5,380	47,230	2,950	27,635	1,618	11,225	3,616	809	13,310	.....	.....	.....	4,749
Oct.	96,369	20,368	5,040	46,310	3,923	24,932	1,594	8,542	3,462	774	11,764	.....	.....	25,612	4,249
Nov.	97,641	19,023	5,066	46,264	3,196	25,569	1,597	9,042	2,929	832	15,054	.....	.....	45,935	4,406
Dec.	1,881,170	346,816	68,886	462,064	42,750	295,312	19,529	106,134	37,116	9,062	136,612	24,676	72,361	426,513	53,090
1959	95,542	24,669	5,342	44,579	3,115	25,945	1,724	7,356	3,685	679	17,385	2,469	5,349	48,699	4,600
Jan.	86,432	28,016	4,810	45,589	1,827	24,289	1,599	9,211	3,521	557	11,388	1,614	5,930	44,420	4,339
Mar.	101,410	32,427	4,771	44,554	1,601	26,959	1,694	8,654	3,536	810	10,746	2,034	4,573	51,530	4,611
April	98,376	32,130	5,201	42,715	4,250	26,859	1,870	11,259	3,593	763	17,938	2,330	7,419	48,150	4,528
May	104,236	32,622	5,275	46,083	3,770	25,358	1,771	7,693	3,503	764	18,510	2,480	6,408	53,067	4,676
June	99,419	36,979	5,847	46,901	3,352	24,635	1,743	10,909	3,231	776	18,628	.....	.....	53,895	.....
July	81,662	36,296	5,755	.....	3,676	26,875	.....	7,108	.....	781	.....	.....	.....	46,806	.....
Aug.	53,247	.....	5,326	.....	2,633	.....	.....	.....	.....	.....	.....	.....	.....	50,285	.....

(a) Reported by Copper Institute. Crude. "Recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper. (d) Copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (e) Blister and/or refined. (f) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (g) Smelter production. (h) Refinery production from imported blister only. (i) British Bureau of Non-Ferrous Metal Statistics. \* Refined.

## World Production of Refined Lead

(American Bureau of Metal Statistics)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia	French Morocco	Tunisia	Rhodesia	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1955	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,906	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,185
Total 1955	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,954,344
1956	604,533	142,935	218,266	55,971	.....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,442	27,069	12,364	2,041,530
1957	43,441	12,837	18,455	6,899	8,773	7,890	16,548	4,597	6,392	8,600	4,335	26,359	3,375	1,174	1,204	171,654
Mar.	40,984	11,785	21,099	5,626	8,917	8,858	15,144	4,652	6,281	7,021	3,481	19,876	2,338	2,394	1,204	160,946
April	47,487	12,212	21,095	5,421	9,058	8,339	16,327	2,402	6,944	7,482	3,541	25,035	3,532	2,978	1,204	174,255
May	44,636	12,706	17,846	6,255	8,264	7,977	15,194	3,677	6,403	6,469	3,461	22,979	2,906	3,127	1,232	164,278
June	38,927	7,175	18,315	6,880	8,548	8,819	11,229	4,681	6,327	6,872	3,557	11,568	2,767	568	1,232	147,624
July	39,250	6,940	17,991	6,100	7,495	15	13,760	4,584	6,913	5,414	3,610	19,942	2,584	2,756	1,176	140,501
Aug.	43,269	10,908	16,256	5,192	7,849	8,202	15,700	4,367	5,692	6,942	3,587	22,632	2,184	2,369	1,120	158,285
Sept.	45,467	12,598	11,968	5,074	7,940	9,308	17,130	4,639	7,121	9,242	3,522	22,482	3,560	2,410	1,176	164,818
Oct.	40,486	10,645	17,067	6,448	9,495	9,068	17,785	4,825	6,914	11,155	3,555	20,148	2,625	2,519	1,120	165,406
Nov.	44,042	11,076	20,902	5,344	10,342	10,351	18,370	5,101	7,069	11,212	3,769	21,492	4,002	2,779	1,120	179,309
Dec.	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	1,955,753
1959	43,662	14,073	19,081	4,951	10,761	6,694	18,658	4,636	6,215	4,082	6,086	24,470	2,575	1,068	1,344	169,256
Jan.	39,498	12,740	15,472	2,662	9,460	5,812	17,869	4,437	6,020	8,596	6,474	22,037	2,319	1,765	1,344	157,928
Mar.	39,238	13,704	16,305	3,424	8,447	6,733	17,553	3,168	6,196	8,153	6,889	20,144	1,905	2,429	1,344	156,914
April	40,606	13,655	16,621	4,438	8,938	5,541	17,141	4,942	6,491	6,876	6,615	23,919	2,726	2,155	1,344	162,611
May	39,101	13,357	16,934	6,606	8,797	7,363	17,728	3,614	7,435	8,369	6,435	23,499	2,050	1,784	1,344	165,900
June	37,459	12,997	20,000	6,540	9,125	6,976	18,128	2,453	.....	7,854	6,358	25,151	1,552	926	1,344	.....
July	32,882	.....	17,099	6,401	8,734	6,065	16,381	4,384	.....	.....	.....	.....	2,859	1,749	1,344	.....
Aug.	25,589	.....	19,086	4,267	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,344	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

## World Production of Slab Zinc

(American Bureau of Metal Statistics)

	United States	Can.	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway	Spain	Yugo-slovia	Japan	Australia	Rhodesia	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1955																	
Total 1955	1,031,018	257,006	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
Total 1956	1,062,954	265,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
Total 1957	1,574,500	247,356	62,854	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,691,699
1958																	
Jan.	72,274	22,314	5,620	2,782	21,453	13,786	16,743	7,584	6,549	2,709	3,851	2,045	3,013	13,217	10,707	2,856	214,049
Mar.	70,214	20,989	5,289	2,597	20,886	14,985	15,693	8,018	6,925	2,586	3,850	2,207	2,853	9,305	10,424	2,772	204,625
May	71,018	21,269	5,254	2,699	20,949	15,279	16,128	6,343	7,202	2,442	3,962	2,372	2,871	13,504	10,918	2,856	211,529
June	66,967	20,354	5,016	2,429	20,094	14,243	15,663	7,202	7,731	2,221	3,307	2,309	2,854	14,040	10,988	2,744	204,067
July	65,119	20,878	5,285	2,520	19,556	14,295	16,210	7,140	8,579	2,471	3,815	2,296	2,928	15,835	10,742	2,884	203,828
Aug.	62,297	21,152	5,216	2,822	18,308	14,253	16,204	6,889	5,991	2,533	3,793	2,259	2,820	12,420	11,076	2,912	.....
Sept.	63,705	20,581	5,025	2,640	17,961	12,232	15,635	6,887	5,991	2,533	3,793	2,259	2,820	12,420	11,076	2,912	199,142
Oct.	65,304	21,125	5,344	2,305	17,866	14,176	16,462	6,046	6,442	2,520	4,815	2,313	2,793	14,456	11,045	2,940	203,169
Nov.	65,174	20,274	5,197	2,625	18,696	13,274	16,196	6,158	5,874	2,249	4,669	2,244	3,370	13,501	10,508	2,928	197,481
Dec.	75,503	21,705	5,537	2,686	19,402	13,844	17,099	7,564	6,344	2,332	4,755	2,262	2,684	12,473	10,860	2,856	213,093
Total 1959	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	34,446	166,883	128,548	39,508	2,464,639
1959																	
Jan.	76,481	21,456	5,476	2,753	19,857	13,903	17,164	5,955	5,617	2,693	4,826	2,028	2,647	11,679	10,541	2,800	211,506
Feb.	71,174	19,709	4,915	1,977	19,838	13,491	15,632	6,123	4,735	2,927	4,928	1,926	2,510	14,105	9,617	2,548	199,495
Mar.	79,918	22,135	5,439	2,363	20,215	14,230	17,325	7,797	6,801	2,921	4,917	2,369	3,014	13,217	10,759	2,800	221,316
Apr.	75,283	21,512	5,225	2,502	20,408	14,987	16,436	6,030	7,099	2,816	5,621	2,239	2,509	16,645	10,426	2,716	215,375
May	77,489	21,147	5,108	2,545	21,181	13,902	16,633	6,595	7,790	2,823	4,798	2,239	2,701	16,135	11,137	2,744	226,021
June	75,544	21,250	4,776	2,524	21,004	14,120	16,185	6,271	7,164	2,599	4,759	.....	2,083	15,836	10,899	2,716	.....
July	73,011	21,055	5,038	2,634	20,100	14,262	16,325	6,112	7,303	2,917	4,839	.....	.....	.....	11,189	2,856	.....
Aug.	69,768	.....	4,965	2,504	.....	.....	6,507	.....	2,968	4,646	.....	.....	.....	.....	.....	2,912	.....



## U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

Virgin Zinc Zinc Conc.

At start of:	1958	1959	1958	1959
Jan.	44,926	34,166	79,349	56,371
Feb.	43,308	34,805	82,125	58,518
Mar.	46,662	36,850	87,721	57,897
Apr.	46,608	38,457	84,631	52,151
May	47,251	38,643	80,964	47,936
June	50,539	37,713	74,470	41,954
July	49,613	38,297	71,553	45,640
Aug.	48,497	37,427	70,105	43,948
Sept.	45,590	40,358	63,909	42,385
Oct.	45,784	...	57,376	...
Nov.	39,341	...	53,371	...
Dec.	35,396	...	58,022	...

## U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

June July Aug.

(Gross weight)

Zinc ore and conc.	29,922	13,846	12,762
Zinc conc.†	12,561	4,858	†
Australia	11,310	2,175	†
Canada	...	2,118	†
Peru	740	565	†
Burma	511	...	†
Zinc and zinc alloys:			
(Gross Wt.)	15,554	12,765	12,594
Rhodesia-Nyasaland	175	175	200
Australia	800	1,789	...
Canada	7,283	6,451	5,788
Belgium	1,549	689	982
Germany (W.)	1,075	10	375
Netherlands	50	75	1,075
Soviet Union	1,510	956	551
United States	255	566	225
Belgian Congo	650	1,000	1,105
Other countries	2,207	1,054	2,293

† British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.

†† Not available.

## U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

June July Aug.

(Gross Weight)

Copper unwrought—ingots, blocks, slabs, bars, etc.	4,704	5,116	7,284
Plates, sheets, rods, etc.	1,573	1,578	1,739
Wire (including un-insulated electric wire)	375	272	463
Tubes	1,111	1,064	828
Other copper, worked (including pipe fittings)	92	147	87
Total	7,855	8,177	10,401

## Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957 Total	407,326	234,158	641,484	507,493	133,991
1958					
April	36,722	19,100	55,822	43,784	12,038
May	35,810	18,423	54,233	43,571	10,662
June	39,277	18,141	57,418	46,080	11,338
July	36,743	17,091	53,834	42,373	11,461
August	28,416	13,756	42,172	33,073	9,108
September	42,813	18,596	61,409	52,018	9,390
October	43,402	21,788	65,190	53,937	11,253
November	40,987	19,232	60,219	47,932	12,287
December	37,580	19,118	56,698	45,968	10,730
Total	442,977	225,001	667,978	534,619	133,359
1959					
January	32,678	21,217	52,979	39,815	13,164
February	29,373	19,020	48,393	35,775	12,618
March	27,864	19,567	47,431	36,124	11,307
April	32,742	22,782	55,525	43,015	12,509
May	28,421	19,199	47,620	33,367	14,253
June	35,009	21,103	56,112	44,761	11,351
July	24,714	19,858	44,572	32,034	12,538
August	24,524	16,097	40,621	30,866	9,755

\* Includes copper sulphate effective October, 1954.

## U. K. Virgin Copper Stocks Zinc Imports and Exports By Principal Countries

(British Bureau of Non-Ferrous Metal Statistics)

(A.B.M.S.)

At start of:	1957	1958	1959	Reported in pigs, bars, etc.; except where otherwise noted.
Jan.	59,614	91,477	64,184	
Feb.	59,203	82,483	65,941	
Mar.	62,120	89,147	65,875	
Apr.	61,779	94,330	72,946	
May	71,101	88,582	72,318	
June	61,991	88,913	78,505	
July	64,121	81,851	80,477	
Aug.	81,146	84,756	81,986	
Sept.	98,595	89,899	89,483	
Oct.	100,815	85,092	...	
Nov.	90,877	74,686	...	
Dec.	81,657	69,023	...	

## U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of:	1957	1958	1959
Jan.	39,420	51,295	45,444
Feb.	41,433	49,134	48,102
Mar.	36,900	47,738	40,535
Apr.	34,877	40,547	53,289
May	44,933	37,509	62,286
June	40,804	34,608	63,135
July	42,148	40,518	57,810
Aug.	48,275	37,148	67,586
Sept.	51,435	43,758	66,048
Oct.	45,301	48,856	...
Nov.	50,371	40,216	...
Dec.	48,065	35,335	...

Imports	1959	Exports	1959
U. S. (s.t.)	6,505	17,151	17,744
Denmark	928	1,108	1,254
France	1,451	1,160	1,573
Germany, (W.)*	7,638	5,797	...
Italy	530	...	...
Netherlands	1,255	1,253	817
Sweden	2,006	2,725	...
Switzerland*	1,008	864	1,657
U. K. (l.t.)	14,984	12,764	...
India† (l.t.)	3,972	4,446	4,528

\* Includes scrap.

\*\* Includes manufactures.

† British Bureau of Non-Ferrous Metal Statistics.

## United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

Tin Content of Tin in Ore

	Imports	Production*	Stock at end of period*	Imports	Production	Consumption	Exports & Re-exports	Stock at end of period
1957 Total	39,272	1,928	...	9,834	34,175	20,365	7,362	71,931
1958								
August	2,235	44	2,063	1,525	2,423	1,412	912	19,676
September	1,743	99	1,564	1,141	2,579	1,784	988	19,942
October	1,913	91	1,419	145	2,488	2,072	882	20,135
November	1,971	96	1,770	851	2,187	1,795	594	19,285
December	2,757	90	2,299	317	2,350	1,802	1,770	19,054
1958 Total	27,419	1,030	...	13,195	32,551	20,413	20,398	19,054
1959								
January	1,337	113	1,095	324	2,925	1,769	2,381	16,744
February	1,817	115	1,300	230	1,677	1,614	4,163	14,715
March	1,545	100	1,595	...	1,572	1,773	2,658	13,264
April	1,743	103	1,798	...	1,636	1,745	3,326	10,685
May	1,493	92	1,575	28	1,808	1,686	2,421	9,445
June	1,323	129	920	...	2,267	1,987	2,919	9,638
July	2,971	...	2,043	...	2,735	1,682	2,639	11,255

\*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

## Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)  
(In Tons)

	1956	1957	1958	1959
Jan. . .	26,653	25,469	32,868	24,664
Feb. . .	26,229	21,861	28,668	28,016
Mar. . .	26,750	27,663	29,239	32,427
Apr. . .	26,617	27,398	30,835	32,130
May . .	27,626	29,086	32,471	32,622
June . .	27,122	24,093	32,418	36,979
July . .	27,250	27,195	31,131	36,296
Aug. . .	29,219	26,943	30,867	....
Sept. .	27,950	24,633	27,546	....
Oct. . .	29,696	30,312	22,572	....
Nov. . .	27,346	27,331	20,368	....
Dec. . .	28,716	31,604	19,033	....
Year	331,174	323,588	346,816	....

## Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)  
(In Tons)

	1956	1957	1958	1959
Jan. . .	4,888	8,946	4,752	5,034
Feb. . .	3,856	6,633	1,553	6,377
Mar. . .	4,007	7,044	9,497	11,831
Apr. . .	7,636	7,314	7,450	7,836
May . .	7,214	9,676	7,764	12,230
June . .	6,632	7,210	4,036	15,610
July . .	9,696	4,682	12,629	3,478
Aug. . .	4,713	6,416	7,232	....
Sept. .	9,908	8,467	5,125	....
Oct. . .	9,072	7,761	10,320	....
Nov. . .	9,227	6,175	10,641	....
Dec. . .	2,734	4,217	11,352	....
Year	79,633	84,541	92,351	....

## Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)  
(Fine Ounces)

	1957	1958	1959
Jan. . .	253,940	634,715	185,367
Feb. . .	380,463	208,149	329,742
Mar. . .	521,849	350,827	425,973
Apr. . .	431,646	284,971	989,593
May . .	523,228	376,082	564,017
June . .	468,559	438,253	871,570
July . .	844,545	529,770	728,598
Aug. . .	811,530	279,511	....
Sept. .	861,857	583,570	....
Oct. . .	432,000	323,475	....
Nov. . .	263,273	217,892	....
Dec. . .	186,569	871,573	....
Year	5,979,459	5,098,788	....

## Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)  
(In Tons)

	1956	1957	1958	1959
Jan. . .	15,981	20,582	26,883	10,620
Feb. . .	11,041	16,272	16,816	10,304
Mar. . .	12,276	14,270	18,662	11,025
Apr. . .	14,476	16,417	23,261	17,079
May . .	12,851	19,048	19,358	21,739
June . .	10,985	10,826	20,831	21,310
July . .	13,599	18,621	21,703	13,650
Aug. . .	14,710	21,980	15,881	....
Sept. .	17,268	14,314	15,373	....
Oct. . .	13,896	13,110	20,341	....
Nov. . .	19,130	16,622	14,391	....
Dec. . .	18,630	16,282	11,138	....
Year	174,843	198,794	224,638	....

## Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)  
(In Tons)

	1956	1957	1958	1959
Jan. . .	21,696	20,340	21,801	21,456
Feb. . .	20,356	19,808	19,743	19,709
Mar. . .	22,010	21,941	22,314	22,135
Apr. . .	21,339	20,504	20,989	21,512
May . .	21,790	20,564	21,269	21,147
June . .	20,780	19,928	20,353	21,250
July . .	21,691	20,061	20,873	21,055
Aug. . .	21,354	20,305	21,152	....
Sept. .	20,691	20,247	20,530	....
Oct. . .	21,412	20,892	21,125	....
Nov. . .	20,470	20,933	20,273	....
Dec. . .	22,012	21,823	21,705	....
Year	255,807	247,351	252,157	....

## Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1957	1958	1959
Jan. . .	2,158,631	2,529,583	3,094,440
Feb. . .	2,051,679	2,294,655	2,264,903
Mar. . .	2,346,316	2,448,698	2,782,307
Apr. . .	2,225,638	2,558,958	2,691,503
May . .	2,111,185	2,650,665	2,499,149
June . .	2,208,584	2,527,632	2,676,937
July . .	2,383,390	2,385,687	2,867,503
Aug. . .	2,592,468	2,884,154	....
Sept. .	2,382,121	2,856,304	....
Oct. . .	2,817,358	2,390,027	....
Nov. . .	2,566,519	2,643,790	....
Dec. . .	2,537,984	2,917,528	....
Year	28,361,873	31,087,681	....

## Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)\*  
(In Tons)

	1956	1957	1958	1959
Jan. . .	16,002	14,032	17,117	17,118
Feb. . .	14,344	15,170	14,908	15,923
Mar. . .	16,857	16,940	15,421	17,389
Apr. . .	11,573	14,275	15,644	16,237
May . .	15,446	14,591	15,131	16,813
June . .	18,145	16,431	15,645	14,968
July . .	15,841	14,377	14,076	15,111
Aug. . .	16,104	14,679	12,260	....
Sept. .	15,760	15,869	15,401	....
Oct. . .	16,725	14,151	14,564	....
Nov. . .	14,865	15,879	16,680	....
Dec. . .	16,056	15,296	18,248	....
Year	188,971	171,690	185,095	....

\* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

## Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)

	1956	1957	1958	1959
Jan. . .	15,550	19,304	17,349	13,565
Feb. . .	11,757	16,618	8,376	12,675
Mar. . .	8,822	14,923	19,636	14,617
Apr. . .	14,317	17,131	16,346	12,789
May . .	11,357	16,680	15,121	11,049
June . .	15,296	16,157	7,776	20,298
July . .	15,499	12,912	27,394	23,122
Aug. . .	13,070	20,520	15,906	....
Sept. .	19,732	17,671	8,670	....
Oct. . .	20,792	16,735	22,810	....
Nov. . .	21,411	17,225	17,978	....
Dec. . .	16,125	16,131	18,344	....
Year	183,728	202,007	195,707	....

## Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1956	1957	1958	1959
Jan. . .	14,985	16,609	16,710	8,047
Feb. . .	14,997	15,027	15,896	12,616
Mar. . .	15,504	16,733	15,853	14,922
Apr. . .	14,431	15,347	15,163	15,493
May . .	15,203	16,225	15,231	16,622
June . .	14,492	15,447	14,603	16,599
July . .	15,125	15,878	12,851	16,199
Aug. . .	14,852	16,756	12,597	....
Sept. .	14,530	15,604	11,786	....
Oct. . .	15,762	15,628	3,682	....
Nov. . .	15,062	14,587	3,178	....
Dec. . .	14,824	15,096	3,298	....
Year	178,767	188,962	140,842	....

METALS, OCTOBER, 1959

## Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959	1959	1959
	June	July	Aug.
Ore, matte, regulus, etc. (content) . . . . .	3,580	2,949	4,605
United States . . . . .	971	1,697	304
Belgium . . . . .	126	61	116
Germany (W.) . . . . .	46	54	118
Norway . . . . .	1,821	737	1,355
United Kingdom . . . . .	71	106	75
Japan . . . . .	545	294	2,637
Ingot, bars, billets, anodes . . . . .	21,310	13,650	15,155
United States . . . . .	10,055	3,928	7,224
Belgium . . . . .	276	672	...
France . . . . .	1,348	448	168
Germany (W.) . . . . .	1,030	392	1,204
Greece . . . . .	56	56	...
Italy . . . . .	...	84	308
Netherlands . . . . .	112	...	727
Portugal . . . . .	55	...	112
Sweden . . . . .	224	...	...
United Kingdom . . . . .	6,430	7,332	4,650
Australia . . . . .	280	...	...
India . . . . .	1,164	738	761
Pakistan . . . . .	280	...	...
Other countries . . . . .	...	...	1
<b>Total Exports:</b>			
Crude & refined . . . . .	24,890	16,599	19,760
Oil and scrap . . . . .	244	414	469
Rods, strips, sheet & tubing . . . . .	1,592	927	1,155

## Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959	1959	1959
	June	July	Aug.
Ore (zinc content) . . . . .	20,298	23,121	18,464
United States . . . . .	18,511	12,723	16,609
Belgium . . . . .	1,787	...	1,318
Netherlands . . . . .	1,233	537	...
Norway . . . . .	6,792	...	...
United Kingdom . . . . .	2,373	...	...
Slab zinc . . . . .	16,878	16,237	11,546
United States . . . . .	9,412	8,870	6,130
Brazil . . . . .	15	...	...
Chile . . . . .	...	...	28
Germany (W.) . . . . .	56	...	...
Netherlands . . . . .	336	...	...
United Kingdom . . . . .	6,452	6,620	5,002
Korea . . . . .	573	714	386
Other countries . . . . .	34	33	...
<b>Total Exports:</b>			
Ore and slabs . . . . .	37,176	39,358	30,010
Zinc scrap, dross, ashes . . . . .	864	475	379
United States . . . . .	81	144	161
Belgium . . . . .	724	174	...
Netherlands . . . . .	59	157	107

## French Copper Imports

(A.B.M.S.)

(In metric tons)

	1959	1959	1959
	June	July	Aug.
Crude copper for refining (blister, black and cement) . . . . .	406	406	...
Belgium Congo . . . . .	406	406	...
Refined . . . . .	11,462	14,613	13,376
United States . . . . .	1,421	1,467	1,923
Canada . . . . .	1,267	2,032	480
Chile . . . . .	980	1,500	1,975
Belgium . . . . .	3,542	4,733	3,634
Germany (W.) . . . . .	...	213	...
Norway . . . . .	178	178	127
Sweden . . . . .	...	50	22
United Kingdom . . . . .	...	...	89
Belgian Congo . . . . .	2,529	2,767	3,505
Rhodesia-Nyasaland . . . . .	1,545	1,673	1,621

**METALS, OCTOBER, 1959**

## Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959	1959	1959
	June	July	Aug.
Ore (lead content) . . . . .	14,539	5,378	7,945
United States . . . . .	3,069	2,523	2,373
Belgium . . . . .	2,999	1,446	2,768
Germany (W.) . . . . .	8,471	1,409	2,804
Refined lead . . . . .	15,610	3,478	4,024
United States . . . . .	10,500	2,281	3,847
Uruguay . . . . .	194	65	...
United Kingdom . . . . .	4,857	1,019	84
Korea . . . . .	...	110	...
Other countries . . . . .	59	3	93
<b>Total Exports:</b>			
Ore & refined . . . . .	30,149	8,856	11,969
Lead scrap . . . . .	319	276	195

## Copper Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in ingots, slabs, etc.; except where otherwise noted.

	1959	1959	1959
	May	June	July
<b>IMPORTS</b>			
U. S. (bliss, s.t.) . . . . .	18,879	27,757	27,860
(ore, etc., s.t.) . . . . .	3,974	12,112	5,331
(ref., s.t.) . . . . .	11,777	19,320	10,742
Belgium* . . . . .	6,328	...	...
Denmark . . . . .	305	291	469
France (crude) . . . . .	...	406	406
(refined) . . . . .	13,975	11,462	14,613
Italy . . . . .	11,638	...	...
Germany, West . . . . .	32,438	29,916	...
Netherlands . . . . .	1,512	2,794	2,809
Norway . . . . .	228	...	...
Sweden . . . . .	5,161	5,020	...
Switzerland . . . . .	1,618	2,711	2,382
U. K. (l.t.) . . . . .	37,171	38,382	32,958
India blister/-ref., l.t.)† . . . . .	2,342	1,970	3,512
Australia (bliss-ter & ref'd l.t.) . . . . .	300	1,427	...
<b>EXPORTS</b>			
U. S. (ore and unref., s.t.) . . . . .	456	37	20
(refined, s.t.) . . . . .	15,301	12,607	11,378
Canada . . . . .	...	...	...
(refined, s.t.) . . . . .	21,738	21,310	13,650
Belgium* . . . . .	13,476	...	...
Finland†† . . . . .	813	484	757
Germany, West . . . . .	6,807	6,473	...
Norway . . . . .	4,018	...	...
Sweden . . . . .	1,668	1,703	...
U. K. (l.t.) . . . . .	4,248	4,704	5,116
Turkey* . . . . .	1,000	...	...
Belgian Congo† . . . . .	21,667	...	...
No. Rhodesia (bliss-ter & ref., l.t.)† . . . . .	50,542	43,092	43,141

\* Includes alloys.

†† Includes old.

‡ Copper wire bars and ingot bars 99% and copper ingots 97%.

† British Bureau of Non-Ferrous Metal Statistics.

## Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxides, matte, etc.)

	1957	1958	1959
January . . . . .	14,260	14,233	6,767
February . . . . .	9,974	12,187	7,976
March . . . . .	14,958	12,316	14,006
April . . . . .	18,671	20,962	14,213
May . . . . .	18,351	20,574	16,142
June . . . . .	14,539	16,144	15,901
July . . . . .	14,181	14,055	11,985
August . . . . .	14,966	13,012	...
September . . . . .	14,160	14,371	...
October . . . . .	13,370	8,335	...
November . . . . .	16,620	3,001	...
December . . . . .	14,606	5,060	...
<b>Year . . . . .</b>	<b>178,454</b>	<b>154,220</b>	<b>...</b>

## French Zinc Imports

(A.B.M.S.)

(In metric tons)

	1959	1959	1959
	June	July	Aug.
Ore (gross weight) . . . . .	19,278	23,798	24,602
Belgium . . . . .	75	...	256
Finland . . . . .	...	1,130	2,000
Greece . . . . .	...	2,934	4,217
Italy . . . . .	6,264	150	1,576
Norway . . . . .	...	1,378	...
Sweden . . . . .	...	850	...
Yugoslavia . . . . .	...	2,015	...
Algeria . . . . .	10,217	5,105	6,185
Morocco . . . . .	2,722	5,942	10,368
Tunisia . . . . .	...	2,075	...
Belgian Congo . . . . .	...	2,219	...
<b>Slabs, bars, blocks, etc. . . . .</b>	<b>1,573</b>	<b>1,537</b>	<b>1,352</b>
Belgium . . . . .	1,339	1,155	900
Italy . . . . .	223	142	127
Netherlands . . . . .	...	240	...
Algeria . . . . .	11	...	...
Rhodesia & Nyasaland . . . . .	...	...	325

## French Metal Exports

(A.B.M.S.)

(In metric tons)

	1959	1959	1959
	June	July	Aug.
<b>LEAD</b>			
Ore (gr. wt.) . . . . .	220	84	114
Pig lead . . . . .	1,109	684	26
United States . . . . .	...	195	...
Uruguay . . . . .	78	...	...
Denmark . . . . .	203	203	...
Germany (W.) . . . . .	500	...	...
Switzerland . . . . .	295	260	...
Other countries . . . . .	33	26	26
Antimonial lead . . . . .	59	52	105
<b>ZINC</b>			
Slabs, bars, blocks, etc. . . . .	271	83	477
<b>COPPER</b>			
Crude copper for refining (blister, black and cement) . . . . .	258	256	133

## U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1959	1959	1959
	June	July	Aug.
(Gross Weight)			
Copper and copper alloys . . . . .	38,382	32,958	35,921
U. of S. Africa . . . . .	12	...	101
Rhodesia-Nyasaland . . . . .	20,367	15,442	22,628
Canada . . . . .	6,857	7,212	6,078
Belgium . . . . .	5	9	5
Germany (West) . . . . .	28	25	27
Norway . . . . .	61	200	200
Sweden . . . . .	9	...	...
United States . . . . .	2,541	772	2,022
Chile . . . . .	8,223	9,000	4,850
Belgian Congo . . . . .	250	250	...
Other countries . . . . .	29	48	10
Of which:			
Electrolytic . . . . .	24,789	18,916	24,267
Other refined . . . . .	3,437	4,925	2,450
Blister or rough . . . . .	9,716	8,706	8,932
Wrought and alloys . . . . .	440	411	272
<b>Total . . . . .</b>	<b>38,382</b>	<b>32,958</b>	<b>35,921</b>



## Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL  
(Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Mag- nesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957 Total	751,856	875,389	30,322	663,330	23,791
1958					
February	50,695	58,356	1,803	42,687	1,294
March	50,547	60,157	1,975	39,719	1,630
April	44,948	59,311	2,215	35,796	1,467
May	44,093	57,506	2,422	36,447	1,655
June	40,701	57,124	2,205	38,132	1,971
July	38,818	51,124	2,200	32,765	1,394
August	45,034	57,790	1,869	35,860	1,804
September	52,796	64,447	2,804	47,127	1,725
October	55,699	74,012	2,627	45,045	1,708
November	55,793	62,476	2,615	48,431	1,409
December	59,487	67,905	2,612	55,600	1,497
Total	596,816	739,915	27,228	508,297	18,920
1959					
January	62,927	66,874	2,151	53,347	1,571
February	62,486	69,589	2,162	48,779	1,285
March	73,351	78,641	2,129	57,600	1,765
April	72,976	82,799	2,455	57,325	1,862
May	68,268	78,413	2,370	60,656	2,025
June	66,471	79,730	2,484	56,128	2,007
July	56,896	69,389	2,265	46,789	1,858

## Copper Castings Shipments

BY TYPE OF CASTING  
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent	Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924	30,734
1953 Total	990,496	888,369	61,316	10,077	27,394	31,408
1954 Total	834,557	751,804	48,849	6,480	32,134	31,408
1955 Total	1,011,748	907,852	63,041	8,541	32,134	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134	31,408
1957						
Dec.	65,708	59,606	3,046	888	2,168	2,168
Total	875,389	789,819	44,746	10,776	30,048	30,048
1958						
January	69,707	63,294	3,327	894	2,192	2,192
February	58,356	52,579	3,202	796	1,779	1,779
March	60,157	54,007	3,395	823	1,932	1,932
April	59,311	53,271	3,385	949	1,705	1,705
May	57,506	51,634	3,077	891	1,904	1,904
June	57,124	51,967	3,001	839	1,317	1,317
July	51,124	46,636	2,351	792	1,345	1,345
August	57,590	52,981	2,425	682	1,702	1,702
September	64,447	58,435	2,888	876	2,248	2,248
October	74,012	67,564	3,239	790	2,419	2,419
November	62,746	57,386	2,604	810	1,946	1,946
December	67,905	61,119	3,535	1,059	2,192	2,192
Total	739,985	667,255	36,529	10,201	22,681	22,681
1959						
January	66,874	59,856	3,572	1,216	2,230	2,230
February	66,589	62,593	3,557	1,176	2,263	2,263
March	78,641	69,472	4,333	1,361	3,475	3,475
April	82,799	73,567	4,640	1,328	3,264	3,264
May	78,413	69,351	4,363	1,291	3,408	3,408
June	79,730	70,836	4,421	1,175	3,298	3,298
July	69,389	61,966	3,869	946	2,608	2,608

## Nickel Averages

Electro, cathode sheets, 99.00%,  
f.o.b. refinery, duty included  
(Cents per pound)

	1956	1957	1958	1959
Jan.	64.50	74.00	74.00	74.00
Feb.	64.50	74.00	74.00	74.00
Mar.	64.50	74.00	74.00	74.00
Apr.	64.50	74.00	74.00	74.00
May	64.50	74.00	74.00	74.00
June	64.50	74.00	74.00	74.00
July	64.50	74.00	74.00	74.00
Aug.	64.50	74.00	74.00	74.00
Sept.	64.50	74.00	74.00	74.00
Oct.	64.50	74.00	74.00	74.00
Nov.	64.50	74.00	74.00	74.00
Dec.	72.48	74.00	74.00	74.00
Aver.	65.165	74.00	74.00	74.00

## Platinum Averages

N. Y. MONTHLY QUOTATIONS  
(Dollars per Troy Ounce)

	1956	1957	1958	1959
Jan.	106.30	101.92	77.85	52.57
Feb.	104.34	98.59	74.82	59.25
Mar.	104.23	93.50	72.096	77.10
Apr.	103.92	93.45	70.72	77.18
May	105.23	92.865	67.34	77.50
June	106.50	92.02	66.18	77.50
July	106.50	90.265	64.35	78.00
Aug.	105.76	84.426	60.94	78.00
Sept.	105.50	84.00	59.60	78.00
Oct.	104.85	84.00	57.327	78.00
Nov.	104.50	83.80	56.41	78.00
Dec.	104.50	78.70	53.154	78.00
Aver.	105.18	89.79	65.07	78.00

## Spot Straits Tin

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1956	1957	1958	1959
Jan.	105.036	101.511	92.94	99.411
Feb.	100.803	101.132	93.915	102.785
Mar.	100.786	99.643	94.452	103.042
Apr.	92.268	99.304	92.988	102.505
May	96.994	93.347	94.512	103.125
June	94.589	98.05	94.708	104.25
July	96.143	96.52	94.892	102.237
Aug.	99.049	94.261	94.988	102.44
Sept.	103.809	93.406	94.101	....
Oct.	106.023	91.838	96.523	....
Nov.	110.921	89.236	99.118	....
Dec.	104.268	92.35	98.989	....
Aver.	101.475	96.301	95.177	....

## Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices  
(Cents per Pound)

	1956	1957	1958	1959
Jan.	104.768	101.347	92.653	99.351
Feb.	100.586	100.257	93.763	102.708
Mar.	100.524	99.476	94.363	103.042
Apr.	99.145	99.286	92.988	102.505
May	96.853	98.335	94.512	103.107
June	94.488	98.025	94.619	104.142
July	96.131	96.44	94.892	102.337
Aug.	98.924	94.159	94.976	102.435
Sept.	103.559	93.313	94.054	....
Oct.	105.716	91.848	96.455	....
Nov.	110.329	89.236	98.985	....
Dec.	104.00	92.34	98.96	....
Aver.	101.252	93.672	95.069	....

## Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb Flask

	1956	1957	1958	1959
Jan.	277.80	256.00	224.35	219.50
Feb.	270.29	256.00	229.39	219.50
Mar.	261.40	256.00	232.096	223.57
Apr.	267.22	256.00	233.06	239.52
May	267.675	256.00	229.48	245.86
June	260.69	256.00	229.00	241.64
July	256.06	256.00	230.25	236.74
Aug.	256.00	252.20	240.27	225.429
Sept.	256.00	248.58	241.12	....
Oct.	255.92	234.48	235.94	....
Nov.	255.13	228.33	230.05	....
Dec.	256.00	226.50	223.54	....
Aver.	261.71	248.51	230.96	....

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## Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)					
	Stocks beginning of month short tons	Production short tons	Short tons Sold or Used	Value f. o. b. plant	Stocks end of month short tons
1957 Total .....	.....	1,647,714	1,579,035	.....	.....
1958					
July .....	168,096	118,541	134,083	64,726,335	152,554
August .....	152,554	125,416	132,765	64,611,494	145,205
September .....	145,205	124,714	146,870	71,641,275	125,049
October .....	124,274	139,836	139,908	68,881,146	124,202
November .....	124,202	140,962	126,619	62,133,129	138,545
December .....	138,545	152,201	145,125	70,946,494	145,721
Total .....	.....	1,565,556	1,595,067	.....	.....
1959					
January .....	146,086	156,700	127,678	\$62,375,824	175,108
February .....	175,108	142,116	133,397	65,668,578	183,827
March .....	183,827	157,189	181,839	82,304,609	159,177
April .....	159,177	155,213	182,930	90,070,280	131,460
May .....	131,460	163,857	182,607	89,672,327	112,710
June .....	112,710	167,323	191,421	93,955,552	88,612
July .....	88,612	179,194	187,387	91,635,864	80,419

## Aluminum Wrought Products PRODUCERS' MONTHLY NET SHIPMENTS (Bureau of Census — Thousands of Pounds)

	Total	Sheet, Plate, Foil, Rod & Bar	Wire & Cable	Extruded Shapes & Tubing	Powder & Paste
1955 Total .....	2,805,500	1,542,368	365,391	812,311	35,854
1956 Total .....	2,870,101	1,577,601	398,602	782,398	28,017
1957 Total .....	2,677,423	1,396,502	399,040	769,430	28,187
1958					
February .....	207,459	118,835	21,983	58,296	1,927
March .....	190,092	108,913	20,692	55,973	1,533
April .....	210,477	118,793	22,178	62,737	1,954
May .....	217,299	115,660	27,361	67,378	2,389
June .....	228,587	118,767	28,674	74,580	2,248
July .....	229,654	126,160	24,678	72,194	2,642
August .....	213,548	115,376	23,581	67,953	3,154
September .....	231,168	125,937	23,287	75,269	2,665
October .....	254,023	128,967	24,442	85,038	2,163
November .....	216,249	121,190	17,771	71,666	1,723
December .....	235,377	130,474	26,253	72,979	1,806
Total .....	2,624,911	1,441,385	285,355	821,249	25,742
1959					
January .....	235,463	132,361	26,480	70,309	2,246
February .....	230,733	131,564	21,740	71,364	2,028
March .....	271,642	161,285	21,940	81,276	2,578
April .....	293,554	166,942	25,468	93,475	3,178
May .....	320,786	184,664	28,532	99,308	3,641
June .....	341,389	195,476	30,156	107,038	3,901
July .....	373,007	211,850	39,902	111,661	4,708

## Aluminum Castings Shipments

(Bureau of Census)  
BY TYPE OF CASTING  
(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total .....	609,066	155,738	213,968	232,726	6,800
1955 Total .....	833,058	171,757	298,115	354,804	8,282
1956 Total .....	801,036	171,763	245,421	376,108	7,736
1957 Total .....	751,656	144,121	232,326	369,086	...
1958					
April .....	44,948	9,531	13,369	21,956	...
May .....	44,093	9,312	13,648	21,091	...
June .....	40,701	8,644	13,679	18,292	...
July .....	38,818	8,658	12,342	17,714	...
August .....	45,034	9,034	14,426	21,505	...
September .....	52,796	10,261	16,241	26,254	...
October .....	55,699	10,932	17,189	27,511	...
November .....	55,793	10,539	16,942	28,264	...
December .....	59,487	10,874	18,970	29,579	...
Total .....	596,790	117,421	186,949	292,599	...
1959					
January .....	62,927	10,907	20,606	21,349	...
February .....	62,846	10,627	21,127	31,021	...
March .....	73,351	12,412	26,964	33,949	...
April .....	72,976	12,700	26,153	33,992	...
May .....	68,268	11,979	25,283	30,877	...
June .....	66,471	12,306	24,927	29,092	...
July .....	56,896	11,581	20,410	24,771	...

METALS, OCTOBER, 1959

## Virgin Aluminum

Ingot (30 lb.) 99½% Plus, Delivered  
Monthly Average Prices  
(Cents per pound)

	1956	1957	1958	1959
Jan. .....	24.40	27.10	28.10	26.80
Feb. .....	24.40	27.10	28.10	26.80
Mar. .....	24.60	27.10	28.10	26.80
Apr. .....	25.90	27.10	26.10	26.80
May .....	25.90	27.10	26.10	26.80
June .....	25.90	27.10	26.10	26.80
July .....	25.90	27.10	26.10	26.80
Aug. .....	26.70	28.10	26.77	26.80
Sept. ....	27.10	28.10	26.80	....
Oct. ....	27.10	28.10	26.80	....
Nov. ....	27.10	28.10	26.80	....
Dec. ....	27.10	28.10	26.80	....
Aver. ....	26.008	27.517	26.889	....

## Magnesium Wrought Products Shipments (Bureau of Census)

(Thousands of Pounds)

	1956	1957	1958	1959
Jan. ..	2,188	2,130	1,271	1,271
Feb. ..	1,901	2,522	1,280	1,691
Mar. ..	1,946	2,388	1,398	1,717
Apr. ..	2,279	2,511	1,479	2,089
May ..	2,462	2,230	1,443	1,644
June ..	2,302	1,881	1,709	1,946
July ..	2,002	1,428	1,227	1,698
Aug. ..	2,523	1,540	1,823	....
Sept. ..	2,031	1,501	1,807	....
Oct. ..	861	1,453	1,983	....
Nov. ..	2,141	1,230	1,662	....
Dec. ..	2,452	1,102	1,622	....
Total ..	24,975	21,915	18,702	....

## Cadmium Averages

N. Y. Monthly Averages  
Cents per lb. in ton lots

	1956	1957	1958	1959
Jan. ..	170.00	170.00	155.00	145.00
Feb. ..	170.00	170.00	155.00	145.00
Mar. ..	170.00	170.00	155.00	145.00
Apr. ..	170.00	170.00	155.00	120.00
May ..	170.00	170.00	155.00	120.00
June ..	170.00	170.00	155.00	120.00
July ..	170.00	170.00	155.00	120.00
Aug. ..	170.00	170.00	155.00	*140.00
Sept. ..	170.00	170.00	152.60	....
Oct. ..	170.00	170.00	145.00	....
Nov. ..	170.00	170.00	145.00	....
Dec. ..	170.00	166.40	145.00	....
Aver. ....	170.00	169.70	152.30	....

\* As of Oct. 1, 1959, for lots of up to one ton.

# Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies			Calculated weekly production, all companies		
	OPEN HEARTH	BESSEMER	ELECTRIC	TOTAL	% of capacity	(net tons)
	Net tons	% of capacity	Net tons	% of capacity	Net tons	% of capacity
1954 Total	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0
1955 Total	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2
1957 Total	101,657,776	87.0	2,475,138	54.9	8,582,082	71.3
1958						
February	5,252,112	56.0	11,597	26.4	448,614	40.6
March	5,598,944	53.9	122,317	35.7	533,361	43.6
April	4,875,619	48.6	109,433	33.1	547,939	46.3
May	5,602,123	53.7	110,366	32.3	588,470	48.2
June	5,378,942	63.4	88,125	26.6	660,418	55.8
July	5,712,587	55.0	114,218	33.4	593,600	48.6
August	6,481,815	62.4	134,135	39.3	670,383	54.8
September	6,769,660	67.3	103,194	31.2	737,518	62.3
October	7,795,541	75.0	148,458	43.4	873,779	71.6
November	7,572,555	75.3	145,867	44.1	850,896	71.9
December	7,764,000	74.7	117,000	34.2	832,000	68.1
Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4
1959						
January	8,280,985	77.1	120,005	39.5	729,675	63.7
February	8,540,000	88.0	129,000	47.0	757,000	73.1
March	10,216,474	95.1	184,892	60.9	929,784	81.1
April	9,884,332	95.0	196,000	66.2	964,850	87.0
May	10,117,968	94.2	200,887	66.1	1,024,401	89.4
June	9,521,053	91.6	185,794	63.2	941,056	84.8
July	4,540,182	42.2	66,433	21.9	526,025	45.9
August	1,171,342	10.9	.....	.....	267,935	23.4
September	1,249,000	12.0	.....	.....	286,000	25.8

# Steel Ingot Operations

(Percentage of Capacity as Reported)

by American Iron & Steel Institute)

Week

Beginning	1956	1957	1958	1959
Jan. 6...	97.6	98.4	56.1	76.2
Jan. 13...	98.6	96.4	57.0	73.6
Jan. 20...	99.0	96.6	55.5	74.6
Jan. 27...	100.4	97.6	54.0	72.6
Feb. 4...	99.3	97.1	54.0	76.9
Feb. 11...	99.1	97.7	53.5	83.8
Feb. 18...	98.8	97.8	50.9	83.7
Feb. 25...	98.8	96.0	54.6	88.5
Mar. 4...	99.3	97.1	53.1	90.3
Mar. 11...	100.0	93.8	52.4	92.0
Mar. 18...	100.6	93.5	52.5	92.9
Mar. 25...	99.5	92.4	50.6	92.9
Apr. 1...	96.6	90.6	48.6	93.2
Apr. 8...	97.7	90.3	48.5	93.3
Apr. 15...	100.9	90.4	46.8	93.8
Apr. 22...	100.2	88.7	47.9	93.5
Apr. 29...	100.5	87.0	47.8	94.2
May 6...	96.4	86.7	49.4	92.0
May 13...	95.2	84.2	52.3	92.9
May 20...	95.3	86.4	56.4	93.4
May 27...	97.3	88.0	58.1	93.6
June 3...	96.3	87.5	62.5	93.7
June 10...	96.7	86.5	84.0	92.0
June 17...	93.4	85.2	64.9	92.5
June 24...	93.0	84.0	61.7	87.8
July 1...	84.9	78.5	51.0	78.2
July 8...	12.3	78.7	53.4	79.5
July 15...	12.9	79.3	54.9	38.7
July 22...	14.6	79.4	57.3	12.9
July 29...	17.0	79.4	57.8	12.2
Aug. 5...	16.9	79.8	58.8	11.2
Aug. 12...	57.5	80.6	60.5	11.8
Aug. 19...	87.5	82.1	62.6	11.3
Aug. 25...	95.8	82.2	63.5	11.7
Sept. 2...	97.0	81.0	61.7	11.5
Sept. 9...	98.7	81.9	65.9	11.6
Sept. 16...	100.6	82.1	65.6	12.6
Sept. 23...	100.6	82.2	67.3	12.8
Sept. 30...	101.6	82.6	70.4	12.8
Oct. 7...	101.8	82.8	71.6	12.8
Oct. 14...	100.9	80.9	74.2	13.0
Oct. 21...	101.4	80.2	74.8	...
Oct. 28...	101.2	79.7	75.0	...
Nov. 4...	101.3	78.0	74.5	...
Nov. 11...	100.6	77.7	74.5	...
Nov. 18...	100.2	76.0	74.1	...
Nov. 25...	100.1	72.1	73.7	...
Dec. 2...	101.1	71.5	73.5	...
Dec. 9...	101.3	69.2	73.5	...
Dec. 16...	102.0	67.7	74.5	...
Dec. 23...	94.3	53.7	74.5	...
Dec. 30...	97.3	59.0	73.6	...

## Blast Furnace Output

(American Iron and Steel Institute)

Period	net tons			% of capacity
	Pig Iron	Permanence & Spillage	Total Capacity	
1950				
Tot. Yr.	64,810,272	678,996	65,489,268	91.5
1951				
Tot. Yr.	70,487,380	745,381	71,232,761	93.9
1952				
Tot. Yr.	61,888,046	629,926	62,517,972	84.3
1953				
Total	74,987,721	855,038	75,842,759	95.6
1954				
Total	69,119,382	669,798	69,789,180	71.6
1955				
Total	77,114,078	888,758	77,999,836	92.7
1956				
Dec.	7,268,743	65,841	7,334,584	101.0
Total	75,301,134	664,341	75,965,475	88.9
1957				
Jan.	7,209,547	72,826	7,282,373	98.8
Feb.	6,596,133	61,973	6,658,106	90.0
Mar.	7,179,100	67,779	7,246,879	98.3
Apr.	6,810,102	60,784	6,870,886	96.3
May	6,879,881	65,566	6,945,447	94.2
June	6,593,326	66,266	6,659,592	93.3
July	6,625,901	66,031	6,691,932	90.8
Aug.	6,719,763	61,988	6,781,751	92.0
Sept.	6,569,074	58,837	6,627,911	92.9
Oct.	6,454,450	65,029	6,519,478	88.4
Nov.	5,711,242	58,637	5,770,879	82.7
Dec.	6,212,624	69,175	6,281,799	82.8
Total	78,557,011	782,660	79,339,671	91.4
1958				
Jan.	4,785,269	69,175	4,854,444	62.8
Feb.	4,016,276	47,953	4,064,229	58.2
Mar.	4,418,778	45,175	4,463,953	57.8
Apr.	3,787,907	39,302	3,827,209	61.2
May	4,048,328	38,468	4,086,796	52.7
June	4,396,285	26,463	4,422,748	59.1
July	4,277,518	26,668	4,304,186	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.0
Nov.	5,907,888	39,275	5,947,163	79.5
Dec.	6,025,386	47,606	6,073,992	78.6
Total	57,296,644	465,456	57,762,100	63.5
1959				
Jan.	6,260,395	48,572	6,308,967	77.9
Feb.	6,047,398	45,274	6,092,672	85.3
Mar.	7,461,760	48,291	7,510,051	93.4
Apr.	7,338,372	54,234	7,392,606	95.0
May	7,683,759	64,237	7,747,996	96.4
June	7,231,531	58,515	7,290,046	94.5
July	3,550,159	23,391	3,573,550	44.5

## Steel Castings Shipments

(Bureau of Census)

Period	(Short Tons)		
	Total	For Sale	For Own Use
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
Total	1,184,096	880,158	303,938
1955			
Total	1,530,694	1,166,706	363,988
1956			
Total	1,931,987	1,512,290	419,697
1957			
June	153,647	119,353	34,294
July	122,018	90,037	31,981
Aug.	145,928	111,080	34,846
Sept.	139,002	105,611	33,391
Oct.	146,397	113,216	33,181
Nov.	127,115	98,436	28,679
Dec.	120,787	92,125	28,662
Total	1,766,191	1,261,301	406,444
1958			
Jan.	120,722	94,717	26,005
Feb.	103,297	79,708	23,589
Mar.	106,233	82,195	24,038
Apr.	91,464	69,121	22,343
May	87,002	66,088	20,916
June	92,681	71,624	21,237
July	68,802	48,618	10,184
Aug.	80,886	59,816	21,070
Sept.	85,377	64,586	20,691
Oct.	95,389	73,367	22,022
Nov.	85,267	65,788	19,479
Dec.	103,800	81,360	22,440
Total	1,114,939	859,125	255,814
1959			
Jan.	105,392	82,693	22,709
Feb.	110,280	86,013	24,267
Mar.	131,317	103,848	27,469
Apr.	134,344	104,890	29,454
May	135,359	105,804	29,555
June	143,624	111,725	31,899
July	106,790	83,541	23,249

## Galvanized Sheet Shipments

(American Iron and Steel Institute)

Period	(Net Tons)		
	1956	1957	1958
Jan.	269,464	235,902	186,649
Feb.	272,997	206,048	167,627
Mar.	291,193	206,836	195,885
Apr.	266,728	198,585	206,368
May	272,741	206,657	231,318
June	279,068	239,037	277,180
July	167,247	167,247	239,883
Aug.	276,048	186,790	253,263
Sept.	256,803	183,952	258,723
Oct.	278,637	212,886	290,157
Nov.	255,135	190,380	253,909
Dec.	239,173	169,363	266,472
Total	3,057,991	2,392,437	2,828,848

\* Combined with August figures.

## SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

Period	(Net Tons)	
	Hot Dipped	Electrolytic
1958		
Jan.	31,455	30,304
Feb.	29,451	24,602
Mar.	36,794	46,706
Apr.	43,670	54,906
May	37,628	64,110
June	42,850	62,965
July	45,481	36,381
Aug.	46,037	464,439
Sept.	43,217	525,739
Oct.	60,261	763,361
Nov.	14,596	113,134
Dec.	15,842	150,942
Total	447,396	5,049,199

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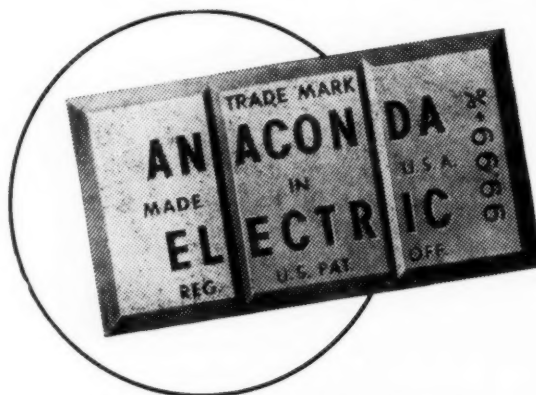
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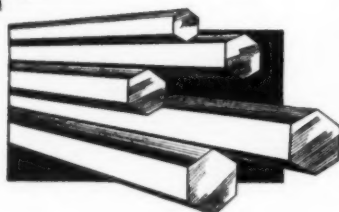
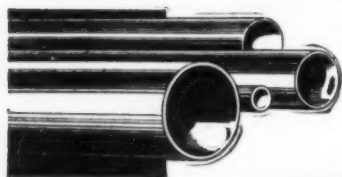
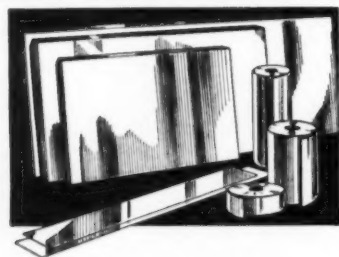


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